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ORIGINAL ARTICLES.

CÆSAREAN SECTION; SUTURE OF THE UTERUS VERSUS TOTAL EXTRIPATION.¹

By HENRY C. COE, M.D.,

OF NEW YORK;

PROFESSOR OF GYNECOLOGY IN THE NEW YORK POLYCLINIC, ETC.

THE presentation of another paper on this subject may appear to be an attempt to reopen an old question, which has been definitely settled by this Society. The subject of Cæsarean section has been so thoroughly studied by our distinguished Honorary Fellow, Dr. Harris, that there remains little more to be said about it, at least as regards indications and results. The same gentleman has shown by his carefully compiled statistics on symphyseotomy how limited has become the sphere of the elective Cæsarean operation. It remains for us to ask whether, in preferring it to a more radical procedure, when performed under absolute indications, we are adopting the same advanced principles which guide us in other departments of abdominal surgery. Lest I may seem to take too radical a position in advocating more frequent resort to total extirpation instead of the more conservative procedure, I would state at the outset that it is my purpose simply to extend the indications originally laid down for the Porro operation in strict accordance with the teachings of modern surgery. The conclusions arrived at, though based upon my own observation and experience, are not new, having been stated in a recent paper by Dr. Edward P. Davis (*Am. Jour. Med. Sc.*, May, 1896), and are offered here in order to evoke a general discussion among those whose opinions carry so much weight.

In the three cases of Cæsarean section which I reported in a former paper (in all of which symphyseotomy was positively contraindicated) the conditions were such that I felt at the time, and have often felt since, that, however successful they may have been from a surgical standpoint, the preservation of the uterus under the circumstances was of doubtful benefit to the patients. One woman, an old multipara, had a small fibro-myoma in the lower uterine segment, which has since increased in size and will eventually require re-

moval, while the patient is constantly in fear of another pregnancy. Another, a miserable tuberculous dwarf (unmarried) did require a second hysterotomy, as I did not see her again until she was eight months advanced. I spared the uterus a second time, but ligated the tubes, and she nearly died from sloughing of the abdominal wound. Between the first and second operations I was obliged to open her abdomen twice in order to separate intestinal and omental adhesions.

The history of a fourth case is as follows:

On February 14, 1896, I was asked by Dr. James Law of this city, to receive into the hospital a patient who had been in active labor (at full term) for eight hours. She was seen by Dr. Malcolm McLean, who expressed the opinion that she could not be delivered *per vias naturales*. She was a primipara, aged twenty-three, who had married a year previously against the positive advice of her physician. She had arthritis of the left hip (presumably tuberculous) at the age of five, from which she suffered for seven years, having had numerous abscesses, with discharge of dead bone, resulting in complete ankylosis, and two inches shortening. Her pregnancy had been normal until the beginning of the last month, when the daily amount of urine diminished greatly, and she had marked edema of the lower limbs. Physical examination: Height, 4 feet 8 inches. Patient extremely anemic, with marked edema of the legs and eyelids. Pulse, 100 and feeble; temperature 99.5° F. Uterine tumor prominent. Uterus drawn upward, and in a state of tetanic contraction, with ring of Bandl marked. Labor pains had entirely ceased. Pelvic measurements: Spine, 7 inches; crests, 7½ inches; external conjugate, 6 inches; true conjugate, 2¾ inches. There was marked lateral obliquity and narrowing of the outlet. The promontory was considerable to the right of the median line, and projected to an unusual degree. Breadth of symphysis, 2 inches. The child appeared to be of medium size, the head presenting O. R. A., high above the brim, the cervix being one-third dilated. It was impossible to cause any descent of the head by external manipulation.

I decided at once that Cæsarean section offered the only chance for the child, and would be fraught with less risk to the mother than craniotomy. Symphyseotomy was, of course, out of the question. The situation was explained to the patient and her husband, who were extremely desirous to save the child. I gave a bad prognosis for the mother.

¹ Read at a meeting of the American Gynecological Society, May 28, 1896.

She was prepared for celiotomy. No urine could be obtained by catheter, but it was evident that her kidneys were seriously affected.

I operated under chloroform and oxygen anesthesia, assisted by Drs. Jarman and McInerny, the former grasping the neck of the uterus after it had been lifted from the cavity. The child (which weighed 6 lbs. 1 oz.) was delivered in the usual manner, and though deeply asphyxiated was revived. The question then arose as to the treatment of the uterus. Although the hemorrhage was slight, the condition of the patient was such that I felt it imperative to complete the operation as rapidly as possible. I believed that I could remove the uterus in less time than I could suture it, and was the more inclined to do this as both ovaries were transformed into cysts the size of lemons. Even if this had not been the case, I would have felt it my duty to prevent the miserable woman from again becoming pregnant. The ovarian arteries were ligated in the usual manner, the bladder was quickly separated and the uterine arteries were tied with the greatest ease. Although the patient was not in Trendelenburg's posture, I never had an easier abdominal hysterectomy. The parts were readily accessible, and the peritoneal folds so loose that they were simply pushed off with the forefinger. Practically no blood was lost. Irrigation with hot saline solution, gauze drainage per vaginam, and closure of the abdominal wound with a single row of silkworm-gut sutures. Time of operation, about thirty-five minutes.

The patient rallied well, but was in a critical condition for several days. The first twenty-four hours she secreted only eight ounces of urine, containing sixty per cent. of albumin and loaded with granular, hyalin, and epithelial casts. Pulmonary edema speedily developed and threatened to terminate fatally, but with careful nursing she was soon out of danger, and her convalescence was subsequently practically afebrile. There was no milk in the breasts. She was discharged during the fifth week, with ten per cent. of albumin in her urine, but no casts, the amount for twenty-four hours being thirty ounces. Both the abdominal and vaginal wounds had healed perfectly at the end of ten days. The patient came to my office two months after the operation in excellent condition. On examination I found that I had unintentionally left a portion of the anterior lip of the cervix. The pelvic roof was as firm as if the uterus had been *in situ*. The child was entrusted to its grandmother, and at once began to fail, being carried off by diarrhea at the end of a month.

In reviewing this most unpromising case, I feel convinced that I acted for the best interests of the patient in deciding upon total extirpation, contrary to the advice of my colleagues. The necessity for rapid work at the time, my doubt as to the aseptic condition of the uterus, and a consideration for the woman's future welfare, all in-

fluenced my decision. The question naturally arose: "Would it not have been better if I had adopted the same course in my other cases, where the operation was performed at a time chosen by myself and before labor had begun?" This question suggested this brief paper.

The familiar arguments advanced in favor of suture of the uterus after hysterotomy are: (1) The woman is left with her generative functions unimpaired; (2) The operation is simpler than hysterectomy, there is less shock, and less danger of sepsis; (3) Statistics are in favor of the conservative operation.

If we were considering the so-called elective operation, performed under the most favorable conditions as regards both the patient and her environment, these arguments would be unanswerable. But such cases are often on the border-line, so that it is quite possible that the patient may be delivered subsequently by forceps or version, and, moreover, symphyseotomy now claims a large proportion of them. This leaves us with the cases of impossible labor, in which there can be no doubt as to the indication for celiotomy. In replying to the first argument, it must be admitted that in suturing the uterus we do indeed leave the patient in the same condition in which she was before, but what is her subsequent history? Time was when the surgeon who was able to report a second Cæsarean section upon the same patient was regarded almost in the light of a public benefactor. Repeated section is sufficiently common and successful, but is it, I would ask, a subject for congratulation in this age of progress? Is it not rather a scientific error? I so regarded it in my case.

The earlier editions of our works on obstetrics used to descant on the heroism of those women who were willing to risk their lives a second, and even a *third*, time for the sake of their offspring. Doubtless they are, but what chance do they have for an intelligent choice? Look over the records of these cases, and you will find that the majority of the patients were submitted through ignorance, rather than with the high motive of preserving the child. It seems to me that we carry conservatism rather far when we deliberately expose to the risk of another capital operation a miserable, rachitic dwarf, illegitimately pregnant, whose offspring is predoomed and whose own life is in great danger of being sacrificed to a sentiment, or to a scientific principle, as you will. The desirability of preserving the functions of menstruation and ovulation, whenever possible, is generally recognized, but how often do we sacrifice the uterus and adnexa in the

case of fibroids, which are a far less menace to life than is a second pregnancy in a woman, with an absolute impediment to natural delivery!

Induction of premature labor is, of course, always a possible alternative, but the statistics of repeated Cæsarean operations show that many of these ignorant women do not apply to the accoucheur again until they are too far advanced for its successful application. Craniotomy is too often the necessary result of such attempts at saving the premature child, whose tenure of life is slight at the best.

As to the simplicity of the technic in suture of the uterus there can be no question. That it is unaccompanied by shock is by no means true. In upward of a dozen operations which I have attended there was marked shock in every one, the patient requiring vigorous stimulation. Yet all were in good condition beforehand, and in several, labor had not begun. There is no comparison between the shock in these cases and that in a prolonged hysterectomy for uterine fibroid. Certainly the time necessary to properly complete a Cæsarean section is often greater than in an ordinary hysteromyectomy. It is granted that sepsis can be eliminated in the majority of cases, at least where there has been no previous manipulation by hands of doubtful cleanliness. But look over our own American records and see how many patients have succumbed to sepsis, even up to this year—not necessarily through any flaw in the technic, but because the operator left a uterus which was already infected. The fact is, that when we are compelled to operate upon patients who have been frequently examined, or subjected to prolonged attempts at delivery, we can never positively eliminate this element of failure, and are obliged to shoulder blame which does not belong to us, and to incur the risk of adding to the unfavorable statistics.

The statistical argument carries little weight nowadays. In my opinion, the former statistics of the Cæsarean and Porro-Cæsarean operations prove nothing, since it is well known that the latter include the majority of the "late" or unfavorable cases. It would be more just to class them under the head of puerperal hysterectomy for septic infection, since the conditions are nearly the same. On the other hand the old Porro operation; with extraperitoneal fixation of the stump, was a crude and imperfect procedure compared with modern total or partial abdominal extirpation. We are making new statistics every year in other departments of surgery, why not in obstetrical?

To return to the alternative—total abdominal

extirpation of the uterus and adnexa. The advantages which the radical operation presents are:

1. Rapidity of execution. Any one who has had occasion to perform the operation must have been impressed with the ease with which ligation of the broad ligaments and separation of the bladder can be accomplished as compared with the same steps in an ordinary abdominal hysterectomy. In one of the writer's cases of celiotomy for rupture of the parturient uterus (clamps being used) it required only five minutes, another in which ligatures were used, about ten. It is not necessary to elevate the patient in Trendelenburg's posture. Time is an important factor, especially in cases of women who have been many hours, or even days, in labor, and are in collapse before they are placed on the table. There is no more shock or loss of blood than after suture of the uterus.

2. By removing the entire uterus we are reasonably certain that no infected tissue has been left within the abdominal cavity. In my first Porro case, seven years ago, the patient did indeed recover, but her cervix had been infected before the operation and sloughed out entirely. Free drainage *per vaginam* may save even the most desperate case. No uterine sutures are left to give subsequent trouble, as in reported cases.

3. Neoplasms of the ovaries or uterus, or diseased appendages, are removed at the time, instead of being left to give future trouble. Removal of the adnexa after Cæsarean section, has always seemed to me to be fraught with considerable risk, since the large, soft stumps, with thin distended veins, are exposed to more or less traction during uterine contractions. Fibroids, apparently not large enough to justify a Porro at the time, have been left behind to give subsequent trouble, as in the case cited.

4. Convalescence is quite as rapid as when the uterus is sutured.

In advocating total extirpation of the uterus, under these circumstances, I have no intention of stirring up the old controversy of supravaginal amputation of the cervix *versus* hysterectomy. The results recently reported by Dr. Davis—three operations by which the mothers and children were all saved, are sufficiently convincing to need no comment. Moreover, the similar operation for fibroid tumors in the hands of Kelly, Baer, and many others, furnish statistics which admit of no unfavorable comment. I would only call attention to the fact that Dr. Davis' operations were performed upon patients who could be regarded as positively *aseptic*, so that in dropping the

stump of the cervix he was fairly certain that no infected tissue was left behind to vitiate his own careful technic.

In my own case, and in others in which the surgeon is obliged to operate under less favorable conditions and upon patients who have been subjected to repeated examinations and manipulations, he may well hesitate about leaving the cervix and closing the cavity without drainage. Moreover, the condition of the patient may be such that time is an important element, and I believe that at full term the removal of the entire uterus is a simpler and more rapid operation than supravaginal amputation with such careful suturing of the stump, as is necessary in order to insure a successful result.

In my experience, the objection with regard to weakening of the vaginal roof by removing the cervix is largely theoretical, in puerperal hysterectomy as well as in total extirpation for any cause. I have been looking for a case of vaginal enterocele ever since I began to do the operation, but in an observation of at least one hundred cases in my own practice and that of my friends who practise total abdominal extirpation, I have been unable to find one. Some of the patients have been under observation for two or three years.

To recapitulate: Granting that the indications for Cæsarean section are becoming every year more clearly defined and that the operation will probably be more rarely performed in the future, in every case in which we decide to resort to it we should ask whether we are justified in allowing the patient to incur the risk of a second operation. The way to avoid this risk is to ligate the tubes, to remove the adnexa, or to extirpate the uterus. As experience has shown, the first two procedures do not furnish positive immunity against a second impregnation. Under some circumstances, the surgeon's duty is clear. The presence of extensive disease, or of neoplasms of the uterus and adnexa, bring the case under the ordinary rules of modern surgery. Absolute failure of the uterus to contract after evacuation of its contents (a rare, but not impossible contingency), and undoubted, or even suspected, infection of the organ were long ago recognized as indications for Porro's operation. To this may be added a dyscrasia (as tuberculosis), which renders a subsequent pregnancy highly undesirable. There remains the class in which dystocia is due to marked pelvic deformity.

The wishes of the patient should be considered, when they really carry weight, but I fully agree with Dr. Davis that this rule cannot

be universally applied. As he fairly states it: "In women of good constitution and happily married, few will be found who will not desire to retain their power of reproduction. On the other hand, in married women of feeble strength, in circumstances of poverty, the burden of childbearing may well be removed. In women illegitimately pregnant and belonging to the class of professional paupers who are likely to be, with their progeny, a constant burden on the State, the continuance of reproduction is certainly to be avoided. Most of the latter class have little conception of the responsibilities of maternity, and even if asked to make a choice, are incapable of doing so intelligently."

COLPOPERINEORRHAPHY.¹

By H. J. GARRIGUES, A.M., M.D.,

OF NEW YORK, N. Y.;

PROFESSOR OF GYNECOLOGY AND OBSTETRICS IN THE NEW YORK SCHOOL OF CLINICAL MEDICINE, HONORARY CONSULTANT TO THE NEW YORK MATERNITY HOSPITAL, GYNECOLOGIST TO ST. MARK'S HOSPITAL, ETC.

TWICE I have published papers on the perineum. The first (*American Journal of Obstetrics*, April, 1880) treated only of fresh tears, the second (*MEDICAL NEWS*, April 25, 1891) gave a detailed description of the anatomical relations of all so-called lacerations of the perineum, old and fresh. To-day I wish only briefly to recall the chief anatomical facts of these lesions in general and give a detailed description of one operation for the most common of them.

The old authors used the expressions *vulva*, *matrix*, and *uterus* to designate the whole genital tract from the rima pudendi to the fundus uteri, and laymen now frequently use the word *womb* in this sense. While every scientific writer nowadays distinguishes the uterus from the vagina, many still confound the latter with the vulva, although there is as distinct a limit between the two latter as between the two former, the line of demarcation being the hymen or its remnants, the *antrunculae myrtiformes*.

There are at the perineal region three rings which are of importance in the understanding of perineal lesions, the vulvar ring—or rima pudendi; the vaginal ring—or introitus vaginalis—and the anal ring. Any of the three may be ruptured separately in childbirth, or the injury may involve two or all of them.

Of all the muscles contributing to the formation of the vaginal ring, the *levator ani* is by far the most important. It forms a horseshoe-

¹ Paper read by invitation at the Fiftieth Anniversary of the University of Buffalo, N. Y.

shaped expansion, which is open in front, is attached in a wide circumference to the walls of the pelvis, and forms a double loop behind the vagina and the rectum.

This muscular expansion, a true pelvic diaphragm, is covered above and below with a fascia; above lies the rectovesical fascia, which is a part of the pelvic fascia, and below the anal fascia, which is a part of the deep perineal fascia.

Between the vulvar and the vaginal ring in front and the anal ring behind lies the perineal body, which forms the center of the whole perineal region, where muscles, fasciae, and ligaments come together. As these are fastened themselves to the surrounding bones, the perineal body becomes the chief support of the pelvic floor.

I have chosen colpoperineorrhaphy for the subject of this paper because it is the remedy for the most common of the tears near the outlet of the parturient canal and because, through a mistake in the publisher's office, the figure in my work on "Diseases of Women" meant to illustrate the operation is defective.

The deep tear of the vaginal ring, implicating the levator ani muscle and its fasciae is usually found backward and outward in the direction of the tuberosity of the ischium, the reason of which is probably that the muscle is caught between this point and the head, while in the median line the intervening rectum and the double fascia that descends in front of it as a continuation of the pelvic fascia furnish a soft pad which protects the muscle. The break is much more common on the right than on the left side, which probably is due to the preponderance of the first position of the vertex presentation. The occiput escapes under the rami of the left pubes and ischium, while the broad forehead continues to press in the opposite direction on the posterior wall of the vagina.

Sometimes, however, the edge of the Δ -shaped break in the levator ani can be followed behind the rectum over on the opposite side. Sometimes the tear is submucous, the muscle snapping while the more elastic mucous membrane stands the strain.

A tear involving the levator ani and its fasciae deprives the pelvic structures above of the necessary support. As soon as the patient gets up from childbed she has a disagreeable feeling of looseness and bearing down. In course of time the mucous membrane bulges out in front and behind, the bladder sinks down, the uterus is first retroverted, then retroflexed, then it descends, and may finally hang, surrounded by the inverted vagina, between the thighs. The strain on the

uterosacral ligaments, the broad ligaments, and the connective tissue of the pelvis, causing pain in the sides of the pelvis and backache. The displacement interferes with free circulation in the pelvis, causes a sensation of heaviness, and produces hyperplasia of the uterus. The vagina is inverted, the cervix is often drawn out to a great length, its lips everted, and often ulcerated.

The prolapse of the anterior wall is correctly called *cystocele*, because almost always the bladder, being fastened to the vagina with short, resistant, connective tissue, is drawn down with it and lies in the anterior swelling.

The prolapse of the posterior wall is erroneously designated as *rectocele*. I say erroneous, because the rectum nearly always stays in its normal place, while the vagina slides away from it, the connective tissue here being much looser and laxer than that between the bladder and the vagina.

For this condition of a broken vaginal ring, with a more or less pronounced prolapse of the posterior wall of the vagina, whether combined with a tear of the vulvar ring or not, I think colpoperineorrhaphy is the best operation.

The operation consists in the removal of a triangular piece of the mucous membrane of the posterior wall of the vagina and the vulva, in the folding in from side to side of the denuded surface, and in the elevation of the posterior wall toward the anterior.

Preparation.—The patient's bowels are emptied by means of a heaping teaspoonful of compound licorice powder, given the evening before the operation, and an enema of a quart of soap-suds, given at least six hours before the time set for the operation.

The hair should be shaved off the labia and the anus, but may be left undisturbed on the *mons veneris*. The vulva and the vagina are scrubbed with tinct. saponis veridis, followed by several quarts of a solution of bichlorid of mercury (1-2000).

The patient is placed in the dorsal position and her feet raised, with more or less bent knees. In private practice I use Robb's leg-holder for the purpose; in hospital practice, the feet are fastened to uprights with stirrups.

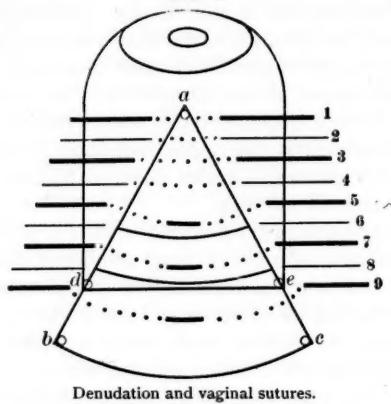
The operator sits in front of the field of operation and an assistant stands on either side, in order to sponge, irrigate, stretch the tissues, and help in inserting the sutures.

The operation should be performed with almost mathematical exactitude, beginning by placing certain landmarks.

A point is chosen on the mucous membrane of

either labium majus, near the edge of the same, and at such a distance from the clitoris that after the operation an opening is left of suitable size for copulation. These two points (*b* and *c*) are

FIG. 1.



marked by making a small nick with curved scissors in the mucous membrane.

Next the assistants spread open the vulva and vagina by pulling the labia majora apart in a transverse direction. The operator chooses a point in the median line of the posterior wall, as high up toward the cervix as the prolapse goes (*a*), and seizes it with a bullet forceps with catch, pulls it forward and upward, putting the mucous membrane on the stretch, and leaves the forceps in the hands of the assistant to the left of the patient. Next he draws imaginary lines from this point to the two nicks on the labia majora, and where these lines intersect the lateral furrow of the vagina (*d* and *e*) he inserts another bullet forceps, or preferably a strong tissue-forceps, which does not tear out so easily as does a bullet-forceps, or, still better, a tenaculum-forceps.

Next, a small hole is cut in the mucous membrane just inside of the two lateral pairs of forceps. A pair of blunt scissors, curved on the flat, are introduced closed through the opening on the left side, with the concavity turned toward the operator, and pushed up to the median forceps, and then across to the other side and out through the opening there. Next this triangular flap is cut loose on both sides. If an artery spurts, which is exceptional, it is compressed with pressure-forceps or tied with fine catgut.

Next, the scissors are entered through the opening on the left labium majus (*c*), and pushed up to the forceps in the lateral furrow (*e*), and down to the line of demarcation between the mucous membrane and the skin (*b c*), thus loosening the whole mucous membrane on this side.

Next, the scissors are entered through the opening on the right side (*b*), and this half is loosened and, finally, the whole piece is cut loose along the edge (*cc, cb, de*).

While the upper part of the triangle is loosened very easily, there are often cicatrices in the lower part, which have to be severed with small nicks made with the opened scissors.

This way of denuding penetrates much more deeply than if only a superficial layer is cut off from the mucous membrane, and it causes less hemorrhage than if the same amount of tissue is removed with the knife.

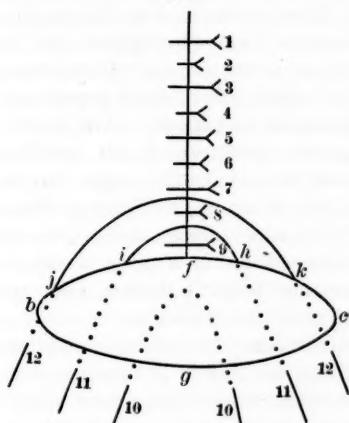
The second step in the operation consists in the insertion of sutures. I use silk, braided No. 4 for the deep vaginal, braided No. 2 for the superficial vaginal, silkworm-gut for the deep perineal, and fine catgut or silk for the superficial perineal. Large curved Hagadorn needles are very serviceable for all the sutures.

The sutures are put in from side to side, beginning from the top of the triangle (*a*), alternating deep and superficial ones (1 to 9, dark lines, deep sutures; light lines, superficial), and leaving a quarter of an inch between two and two sutures. They are tied immediately and cut short. The superficial (2, 4, 6, 8) go only through the edges of the mucous membrane. The deep ones go in the upper part horizontally from side to side and under the whole surface. When the surface becomes too broad, the needle is brought out a quarter of an inch from the median line and inserted on the corresponding point on the other side. The sutures are also placed in a slanting direction (5, 7, 9) so that, when tightened, they lift the posterior wall up, having a resisting point behind where the lateral sulcus is yet fastened to the pelvic bones with fasciae. Thus we proceed all the way down until the distance from the last suture to the landmark on the labia (Fig. 2, *fc*) is equal to that from the latter point to the median line, following the skin (*cg*). About five deep and four superficial sutures are needed. This leaves us a surface to be used in forming a perineum.

For this purpose, three sutures are inserted from the skin. The first (10) enters about half an inch from the median line and three-eighths of an inch from denuded surface, and is carried all under the surface about two-thirds of the distance up to the lower end of the closed line of sutures (*f*). The second (11) is inserted midway between the first and the third, and is brought out on the upper edge of the denuded surface, between the inner and middle third of its length

(*b*), reinserted at the corresponding point of the opposite side (*i*), carried under the denuded surface and out on the skin. The third (*12*) is inserted outside of the outer end of the wound (*c*), carried under the denuded surface, brought out on the upper edge between the middle and outer third of its length (*k*), inserted at the corresponding point of the other side (*j*), carried under the denuded surface, and out through the skin outside of the right end of the wound (*b*). These

FIG. 2.



Vaginal sutures closed. Perineal inserted.

three sutures are seized singly with forceps as soon as each is put in, but not tied until all are in place, and the surface has been well irrigated.

The direction given to the sutures insures a very perfect adaptation of the edges and makes the surfaces brought in contact with one another sufficiently broad to form an excellent substitute for a perineal body.

In order to obtain union of the skin, which is always the most difficult, I introduce a couple of superficial sutures between the deep perineal sutures. (Fig. 3. 1, 2, 3).

As the deep sutures are passed close up to the rectum it is necessary to guide the needle with a finger introduced into that viscus. This is much against the rules of aseptic surgery, but of two evils the lesser should be chosen, and by washing the finger in a solution of bichlorid of mercury each time it is withdrawn from the intestine, the danger of wound-infection is at least diminished. As a matter of fact I can state that all my cases, and I have operated on a considerable number, have healed by first intention.

The perineum is covered with a pad of iodoform gauze and plain sterilized gauze kept in place by a T-bandage, and the knees are tied together.

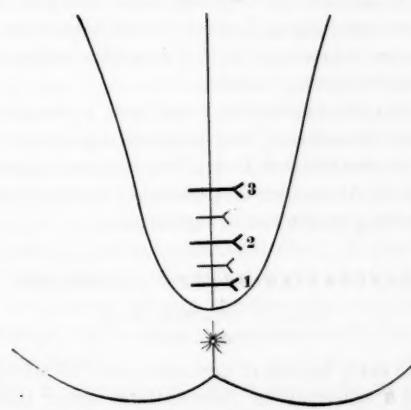
After-treatment.—The patient is kept in bed

for two or three weeks. At first there is usually some pain calling for small doses of morphin, but opiates should be avoided as much as possible as they produce hard stools. The urine is drawn with catheter for the first few days. On the morning of the fourth day the bowels are moved with three fluid drams of castor oil, and when the patient feels that she is going to have a passage four ounces of olive oil are injected into the rectum. After that about two fluid drams of castor oil are given every morning, enough to have an easy movement once or twice in twenty-four hours. Before the bowels have been moved the diet should consist exclusively of albuminoid food, such as milk, eggs, beef juice, and raw oysters, so as to have as little fecal matter as possible. Later the patient is allowed full diet.

She may lie on her back or on her sides, but should move slowly and be assisted by a nurse in turning over. The knees should be kept tied together for two weeks, but not tighter than to allow some movements, the object being only to prevent so much spreading of the thighs that the perineal sutures are strained.

The dressing is changed daily. When there comes some sero-purulent discharge, vaginal injections with carbolic acid or lysol should be given twice a day. If the discharge is bloody, liquor ferri chloridi, half a teaspoonful to a pint of water should be given three times a day.

FIG. 3.



Perineal sutures tied.

In order to avoid the formation of a perineal fistula, I remove the middle perineal suture on the fourth day. The two other perineal sutures are removed on the eighth day, the vaginal sutures at the end of three weeks. For this last part I introduce a virginal Sims' speculum under the symphysis pubis.

The patient should be cautioned not to have sexual intercourse for two months.

The objection has been made to operations of this kind that they bring together parts which normally are not united. That is true, but since we cannot repair the damage made in the levator ani muscle and its fasciae, we must be content with supplying a substitute for the original support. The operation produces a solid perineal body and one which is suspended from the pelvic bones above, just as in the normal relations.

The results show the value of the operation. The bearing-down pain and the headache cease immediately. I have seen cases again after years and found them in excellent condition. I have even confined patients upon whom I had operated. Then, of course the perineum is partially torn, but we get only the two well-known triangles, that are so common in primiparae, and which are easily brought together with three perineal sutures put in as described above.

My operation differs from Hegar's in the following points: (1) The blunt, deep denudation. (2) The slanting direction of the vaginal sutures, which lift the posterior wall up against the anterior. (3) The slanting direction of the perineal sutures, which insures a more perfect adaptation of the edges.

Combination with other Operations.—Often the injury present demands other operations which may be performed at the same time. If the cervix is torn, it should be repaired and stitched with chromicized catgut, since it would jeopardize the perineum to stretch it with a speculum sufficiently to remove cervical sutures.

If there is a cystocele I use Stoltz's operation—circular denudation and purse-string suture. If there is retroflexion I combine colpoperineorrhaphy with Alexander's operation—extraperitoneal shortening of the round ligaments.

CONCERNING BRIGHT'S DISEASE.¹

By G. J. TWEEDY, M.D.,
OF WINONA, MINN.

THE early history of medicine, as of all sciences, shows a tendency to differentiate rather than to generalize, due, in large measure, to the fact that clinical phenomena formed the sole basis of medical study, while pathological knowledge was slight. At the time of Bright the anatomicopathological basis was in vogue, with the anatomical element decidedly in the front. Bright's disease was, therefore, at that time purely a dis-

ease of the kidneys. An increased knowledge of the pathological processes involved, and the intimate relation existing between all the organs of assimilation and excretion and the vascular system, has led to a gradual increase in the comprehensiveness of the term in both the causative and pathological lines. At present we know that all forms of Bright's disease are secondary and often directly dependent upon previous disturbances in the general processes of assimilation and retrograde metamorphosis, or as excited by some blood poison. Every form of the disease is directly traceable to an irritant brought to the kidney by the blood, or to mechanical disturbances of the circulation which affect other organs as well, or to a combination of the two. The most constant and diagnostic symptom of this condition is the presence of albumin in the urine; but this alone is not to be relied on, as Bright's disease may exist without albuminuria; and on the other hand albuminuria occurs in a great many instances which are not Bright's disease, and rapidly terminate in complete recovery.

Albuminuria may be divided into physiological and pathological, and it becomes an exceedingly important point to determine when albumin in the urine is significant of organic change, as well as to ascertain what relation so-called physiological albuminuria may hold to subsequent changes. The passage of albumin from the blood into the urine is dependent upon some functional failure on the part of the epithelium of the glomeruli. This is easily understood when some inflammation or degeneration exists, but in cases where the albumin is due to nervous influences or to maintain an equilibrium in the nutritive elements of the blood, and we say that it is a "temporary functional disturbance," such an expression does not convey to my mind a very clear idea of what really takes place. I presume the solution of it can only be clinical.

An albuminuria occurs: (1.) In all the distinctly infectious diseases, and is due to those chemical products of bacteria known as ptomaines, probably assisted by the high temperature, vitiated blood, and disturbed circulation. (2.) It is caused by irritating drugs, such as cantharides, turpentine, etc. (3.) It occurs in certain diseases of the brain and cord. (4.) In some chronic diseases marked by certain changes in the blood, and in mechanical disturbances of the renal circulation, such as tumors.

The albuminuria brought about by pregnancy illustrates the part played by irritants in the blood and pressure on the circulation; the enlarged uterus

¹ Read before Winona (Minn.) County Medical Society, April 7, 1896.

causes obstruction to the circulation and consequent hyperemia and hyper-excitability. The tissue changes in the growing fetus are exceedingly rapid, so that the extra amount of excrementitious matter removed by the maternal organs, is increased in far greater ratio, than it would be if her own tissue were increased by an equal amount in weight; thus we have not only the hyperemia of pressure, but also of excessive activity and direct irritation set up by the increased excrementitious matter. A very large percentage of all these cases rapidly recover when the cause or causes are removed, but if the irritation or disturbance be kept up too long, or a predisposition inherited or acquired exist, degeneration and destruction take place. Bright's disease may then be defined as a "non-suppurative inflammation of the kidney, with manifestations determined by its etiology, the special elements affected and the inherited tendencies of the patient;" but the heart, blood-vessels, liver, and kidneys are so intimately related, that it is impossible to consider one without the other, and in order to get at a proper basis let us consider blood-pressure.

In early life there is a low blood-pressure and a rapid pulse-rate. This low blood-pressure is due to the fact, that the arteries are large in comparison to the heart and the length of the body, and the rapid pulse-rate is due to the shortness of the circuit traversed by the blood. These conditions prevail during early life, more especially the first year. During this time growth is rapid because of the fluid food with which every part is flushed, and the whole body grows in every part, but the growth of the arteries in caliber does not keep pace either with the growth of the body in length, or with the growth of the heart in size and strength. The natural result is a gradual rise in blood-pressure and an equally gradual slowing of the pulse-rate, until early manhood when the growth is complete and the blood-pressure reaches its highest normal. But as development progresses, the arterial coats slowly undergo a change of structure, by which they lose their elasticity and become gradually converted into more or less rigid tubes. The effect of this loss of resilience in the arterial coats is that while these coats yield as formerly to the advancing blood-wave, they yield more slowly and they do not entirely recover themselves, so that the lumen of the arteries undergoes a gradual dilatation. From the dilatation of the arteries there is a tendency to lowering of the blood-pressure, but the cessation of active growth makes a large network of capillaries unnecessary

and many of them obsolete, giving rise to the wrinkled skin, gray hair, and other evidences of age. But, by the time the heart has succeeded in permanently dilating the inelastic arteries, and has restored them to their former relative size the increase of the peripheral resistance due to the withering of the capillaries is sufficient to counterbalance any material lowering of the pressure; but, generally speaking, in health there is a slight fall in the blood-pressure as age advances.

We always have an increased blood-pressure during and preceding Bright's disease, the nephritis being merely concomitant and secondary to the general systemic disease. A case of Bright's disease that means not only a degeneration in the kidney but in the vascular system generally, there is quite sure to have been a previous stage of increased blood-pressure with hypertrophy of heart and blood-vessels. The most frequent cause of increased blood-pressure is undoubtedly irritation by some foreign elements in the blood, or an excess of normal elements demanding removal. Irritation is but a step beyond stimulation, and degeneration is the direct consequence of excessive activity, so that all those elements which excite normal action of the kidney and blood-vessels may, when in excess, lead to inflammation and degeneration. Of these the most frequent, the most persistent, and the most injurious, is uric acid. Or, to reverse the order, and give it as it occurs: over-indulgence in nitrogenous foods, uric acid in excess, increased blood-pressure, hypertrophy of heart and blood-vessels, degeneration and disintegration. This hypertrophic condition preceding the degeneration, takes place in the muscular coat of the blood-vessels which has been developed as a conservative process and has become converted into a pathological one secondarily. This illustrates a truism we should never fail to recognize, viz., that many processes which we call pathological, and which, in their fullest development, tend directly to death, are at the beginning strictly conservative, and should be recognized as nature's measures for bringing about a cure.

But all persons who have an increased blood-pressure with an irritant in the blood more or less constant, do not have Bright's disease. There is another important factor in the causation, and that is a peculiar fibroid diathesis inherited or acquired. Thus, Bright's disease may be said to occur in two classes of cases.

1. Those suffering from a peculiar condition in which all forms of irritation tend to the induction of fibroid inflammation, not only under a stimula-

tion (which in other individuals would produce only a healthy nutritive activity), but even in what would be considered purely physiological conditions.

2. Those in whom, either through an inherited or acquired functional weakness of the organs of direct and retrograde metabolism, or on account of intemperance in food or drink, the kidneys are for a long time called upon to eliminate both an excessive quantity of the normal elements of excretion and also products of faulty metabolism.

Since tastes, habits, and moral qualities are inherited as well as physical defects, we often find individuals with the weak power of metabolism following up those perverted habits which brought about those weakened conditions of their ancestors, until eventually a set of individuals is developed who combine a marked fibroid diathesis with functionally weak livers, hearts, blood-vessels, and mucous membranes, and for whom we can predict a premature death, from either apoplexy, cardiac failure, or Bright's disease, unless prevented by a proper regulation of habit and diet.

I have endeavored to treat this subject from its causative and pathological point, and to illustrate the underlying principle, rather than to simply state facts; and in the treatment, I shall continue in a general way, without going into the individual forms of the disease. As a matter of course, the treatment of amyloid degeneration coincident with prolonged bone suppuration or syphilis, would vary in detail from the treatment of acute Bright's disease subsequent to an attack of scarlatina; but I think the principle involved is the same.

The preventive treatment will begin long before the appearance of albuminuria or dropsy. When the patient comes with the uric acid diathesis, complaining of headaches, depressed feeling, attacks of irritability, tendency to rheumatism and gout, then is the time to begin the prevention of Bright's disease by a proper regulation of food, drink and habits, suitable to maintain a condition of health with the least possible amount of irritation. Here I should like to read from Balfour's work on the senile heart, a statement also applicable to diseases of the kidney. "Moderation in all things is the true secret for preserving a sound mind in a sound body, and, if it be not a certain passport to longevity, it at least enables us to live healthily for as long as we may. In these days when every doctrine is a fad and gets pushed to an extreme, there are multitudes eager to enforce a rapid teetotalism upon all their fellow-men, as the only panacea for health, happiness, and lon-

gevity. But if we except the votaries of vegetarianism, which is more of a cult than a protest against excess, I know of no society that inculcates by precept or example, temperance in regard to food; yet there is nothing ages a man or woman so rapidly, there is nothing that shortens life so certainly, and there is nothing that embitters the latter days of life so much as over-indulgence in food." Bearing in mind the physiological process of digestion of the various foods, and which bear heaviest on the different organs of digestion, it will usually be not difficult to formulate a diet that will insure the least possible amount of irritation in the blood. If the disease becomes established we find several indications presented for consideration.

In relieving the kidney, both from functional activity and the irritation of its products, of excreta—normal and excessive—acid urine and partially converted elements of retrograde change, the two available channels for vicarious elimination of urea, are the bowels and skin. The bowels are the more important channel, and for its successful accomplishment two things are necessary: an active condition of the bowels, and some element which shall render the excrementitious matters as soluble as possible. Calomel is to be preferred. Its action may be regarded as three-fold. The increased hepatic activity results in a more complete metabolism of the waste materials in the blood and their partial excretion in the bile. The total quantity remaining in the blood for further removal is thus not only lessened, but the metabolic processes are more complete, and the elements of excretion are rendered more soluble and less irritating to the kidney, the bowels, and the skin; urea being much more readily eliminated than uric acid. And, lastly, the cathartic action of the bile is entirely sufficient for the rapid removal of all the intestinal excretions, at the same time that its antiseptic action prevents any tendency to ammoniacal decomposition in the intestine.

During this time, waste of water and albuminous elements must be freely compensated for. Elimination of urea being not only favored by high dilution, but it becomes far less irritating. The restoration of the lost albuminous elements is best accomplished by the free use of milk. When, however, dropsy is to be reduced by the bowels, entirely different conditions prevail, and instead of calomel, a highly irritating cathartic, producing watery evacuations, is more desirable. For producing activity of the skin, the hot-air bath is most desirable. The use of philocarpin is generally

contra-indicated except, perhaps, in an urgent case of uremia or pulmonary edema developed suddenly. The bowels and skin, being attended to properly, they should be regarded as merely palliative or adjuvant to more direct treatment of the kidney.

In the kidney there are three indications: First: To remove as far as possible the inflammatory products, degenerated epithelium and cellular infiltration of the tubules, by increasing the amount of watery elements in the urine and flushing out the kidney. For this pure water is best, of drugs digitalis is best, and had better be combined with an alkaline water until the quantity of urine is increased. The activity of the kidney and the mechanical removal of tubular *debris* are retarded by the congestion of the kidney, and this gives us the second indication, viz., the relief of congestion. This is best accomplished by hot applications to the loins. Poultices or hot-water bag, by equalizing the circulation, favor and assist the action of the remedies mentioned. The third indication concerns the effects of the retained excrementitious products upon the nervous system. Special reliance is to be placed on hypodermics of morphia and enemata of chloral hydrate; only in extreme cases are anesthetics required. In addition to this, in the chronic forms of the disease, especially the so-called parenchymatous form, iron tonics and cod-liver oil should be employed to arrest, if possible, the degenerative changes and tone up those parts of the kidney which are still healthy, or in which the degenerative processes have not rendered activity impossible.

CLINICAL MEMORANDA.

A CASE OF INTESTINAL OBSTRUCTION. OPERATION, AUTOPSY, AND PATHOLOGICAL REPORT.

By T. A. FELCH, M.D., and CARL C. WARDEN, M.D.,
OF ISHPEMING, MICH.

AN Englishman, laborer, aged twenty years, was first seen by Dr. Felch in May, 1895. Family history negative. The patient had been blown some distance, through a window, by the force of an explosion, falling upon the buttocks. He complained of pain in the left iliac region and of constipation. Examination elicited pain, and revealed a soft tumor in the region of the sigmoid flexure, due to an accumulation of flatus. A dose of magnesium sulphate relieved all symptoms. Subsequently the patient had repeated attacks of a similar nature, with symptoms more aggravated, and seemed to lose weight. Catharsis always brought relief. On October 1, 1895, Dr. Felch found the patient pale and cachectic, eyes bright, features

anxious in expression. Dorsal position with knees flexed on the abdomen. Tongue large and flabby and coated with a brown fur. Respirations shallow, rapid, and costal. Temperature 104° F.; pulse 120. Abdomen enormously distended and tympanitic. Vomiting fecal in character. He complained of pain all over the abdomen, and could not bear the weight of the bedclothes. Had had no movement of the bowels for twenty-seven days, but occasionally passed a little flatus. Rectal examination revealed nothing.

The diagnosis of intestinal obstruction, with probable seat of obstruction at the sigmoid flexure, was made. Copious enemata were given, without effect. Operation was advised as a last resort, and eagerly accepted by the patient.

The abdomen was opened in the median line by an incision extending from an inch above the pubes to a point midway between the ensiform cartilage and the umbilicus. Coils of enormously distended and greatly congested intestines presented, and were covered with hot, sterilized towels. The cecum was full of gas, and the ascending and transverse colon packed with the fecal accumulation of nearly four weeks' time. The sigmoid flexure was greatly distended, almost gangrenous, and tightly bound down by adhesions. Immediately below was felt a hard, nodular mass of irregular outline, occluding the lumen of the gut for about two inches. An inguinal colotomy was at once performed, and the gut irrigated with warm, sterilized water, through the artificial anus. Great quantities of fecal matter came away, but it was impossible to dislodge the masses in the ascending colon.

The patient's condition demanded a speedy termination of the operation, but it was found that the coils of intestine could not be returned to the abdominal cavity, on account of the extreme distention. Incisions were accordingly made in them, and subsequently closed with Lambert sutures. The abdominal cavity was then washed out with moderately hot sterilized water, the intestines returned, the wound closed, and a dressing applied. A rubber tube of large lumen was wrapped in sterile gauze and inserted in the artificial anus. A voluminous pad of antiseptic gauze was placed over this opening to catch all discharges. During the operation active stimulation was necessary. The patient was then put to bed, but succumbed in four hours.

An autopsy was held, and the rectal tumor removed for pathological examination.

To Dr. George Dock of Ann Arbor we are greatly indebted for the following report:

"Dear Dr. Warden: Your specimen from the rectum (hardened in Müller's fluid and alcohol) consists of a section of the intestine, with part of its attachment. The ends appear normal. The middle part is hard, of the same diameter as the ends, strongly curved, and measuring 8.2 cm. in length on the convex side. The peritoneal surface is smooth for the greater part, but in one place rough, as if the seat of inflammation. Cross-sections show an annular new growth, causing marked thickening of the submucosa. In some parts, the mucosa and muscularis are very narrow. The new growth also in-

vades the mesentery in some places. The thickness of the intestinal wall varies from 5 to 10 mm. The lumen is much contracted, measuring in most places involved by the growth between 4 and 8 mm. in diameter, in some parts being almost totally occluded.

"Sections cut from various parts were stained in various ways. Both in the involved and apparently normal parts the staining is imperfect. In the apparently normal parts the mucosa shows extensive small-cell infiltration, with excessive mucous degeneration of the tubular epithelium. In the involved parts, the mucosa shows extensive infiltration, sometimes appearing as granulation tissue, with remains of tubules. There are extensive areas of degeneration, with sloughing, reaching almost to the submucosa. In many places the muscularis mucosæ is absent, the granulation tissue and remains of the tubules being immediately above the new growth. This latter is alveolar, with narrow septa, containing few nuclei and few and small blood-vessels. The roundish or irregular alveoli contain more or less degenerated cells. In a few places these are roundish or polygenal, with protoplasm, which stains well with eosin, and small, roundish nuclei. For the most part, however, the alveoli are filled with roundish masses of colloid material, in which nuclei can rarely be recognized. Other cells are occasionally encountered which are only partially degenerated, the protoplasm containing round granules of colloid material. The new growth extends into the circular muscular coat irregularly, and, entirely replacing the submucosa, is from 3 to 5 mm. wide. In some places the circular muscular coat contains isolated alveoli; in others, rows of colloid cells, or larger rows of small, round cells. These latter stain poorly, so that details of the nucleus cannot be made out well, but are probably polynuclear. Other masses of colloid cells occur in the longitudinal muscular coat and beneath the serosa, sometimes reaching a thickness in the latter of 4 to 5 mm.

"The specimen is one of colloid cancer of the rectum, with ulceration, and effectually obstructing the lumen of the gut at that part. It is interesting on account of the patient's age, cancer of the rectum being uncommon in early life.

Yours very truly,
GEORGE DOCK."

REPORT OF TWO CASES OF SURGERY OF THE BILE PASSAGES WITH COMMENTS.¹

BY SCHUYLER C. GRAVES, M.D.,
OF GRAND RAPIDS, MICH.;
CONSULTING SURGEON TO THE U. B. A. HOSPITAL AND SURGEON TO
THE CHILDREN'S HOME.

WHEN one undertakes the discussion of the surgery of the bile ducts he must needs realize the limitations by which he is surrounded, for few as yet have had a very extended experience in this department. Although work along this line, as in other branches of surgery has, after a fashion, been done for many years, really modern procedures having been recommended by Petit as long ago as 1733, it nevertheless can be said that in this work we are touching upon a phase of the newer surgery. Especially

¹ Read before the Barry and Eaton County Medical Society at Nashville, Mich., April 30, 1896.

is this true in its bearing upon the surgery of the common duct.

The surgery of the gall-bladder and ducts has lately undergone much scientific evolution, as the result of which many sufferers are restored to health and usefulness who hitherto have been abandoned to lives of torture and to lingering deaths. Those who have endured the pangs of biliary colic or who have witnessed the distress of others afflicted with temporary or permanent obstruction to the out-flow of bile, can realize the value of the hopes made possible by the development of an ever beneficent art.

CASE I.—Mrs. M., aged thirty-two, weight 140 pounds. Since childhood patient has suffered from attacks of biliary colic. These occurred at intervals, varying from several days to several years. Early history of jaundice, but none since she was ten years of age. Agonizing epigastric and occasionally *left* hypochondriac pain, with chill, fever, and sweat, generally following a meal, and always, of late, following a heavy meal. Attacks recently very frequent. Marked dysmenorrhea, the biliary pain often following that of the former. (Having been considered by several physicians as a reflex of the altered menstrual *molimen* uterine dilatation was done with no effect upon the epigastric distress). Gall-stones were never noticed and true condition was unsuspected. A diagnosis: Ordinary cholelithiasis with periodical expulsion of calculi was made.

On July 3, 1895, at the U. B. A. Hospital, Grand Rapids, a right-angled incision (right hypochondriac region and linea semilunaris) was made, the gall-bladder located and found to contain stones. None were discoverable in cystic or common ducts. Viscus was stitched to parietal peritoneum with fine, aseptic silk, and wound closed with worm-gut sutures, except directly over fundus, which portion was packed with iodo-gauze and patient put to bed. Operation was difficult because of an excessive amount of adipose, the top of stitched bladder lying at least two inches below level of integument. Five days later (July 8th), without anesthesia, the organ was incised and twenty-one calculi, the size of beechnuts, removed by means of a dull, uterine curette. Cavity explored with finger and washed out, but no more stones found. Bile was dark, thick, and stringy. Rubber drain placed in bladder and external wound repacked with gauze. Three days later (July 11th) a hemorrhage occurred. It was found that the bleeding came from the interior of the gall-bladder. Several large, black clots were gently curedt away, but bleeding becoming quite brisk, both cavity and wound were packed with gauze. This tamponade controlled the flow sufficiently to prevent alarming symptoms, but the withdrawal of the gauze was invariably followed by a recurrence of the hemorrhage. Finally the abdominal wound alone was packed, leaving the gall-bladder to fill with blood in the hope that coagulation would correct matters. This idea proved a happy one and there was no further bleeding to any extent, although the stools for several days were very black and tarry. This indicated escape of blood from the gall-bladder into the bowel, and was also the sign of patency in the cystic duct and the *ductus communic choledochus*.

No other bad symptom developed in the case; highest pulse-rate was 120 (second day); highest temperature 100.2° (eleventh day). Case left hospital on the 20th day, and fistula closed on the 34th. Patient has been in excellent health ever since, has gained forty pounds in weight, has no pain, does her own housework, and, strange to say, has very little, if any, menstrual distress.

CASE II.—Mrs. J. D., aged fifty-eight, weight 120 pounds. For many years patient has been a victim of "gall-stone colic". Had passed many calculi to her knowledge. At first no jaundice was connected with the attacks, then slight and transient pigmentation, and for the past few years the coloration has been permanent, although varying somewhat in intensity. When seen by the writer her skin and conjunctivæ were of a deep saffron color. Her sufferings were intense and paroxysms very frequent. Stools were of a clay color. Obstruction to the common bile duct, probably from the impaction of a large biliary calculus was the diagnosis made.

She was kept under observation for a week prior to operation. During this time she had a typical attack, pulse 120, temperature 103.2° . Sweating and evidence of pain were very marked, paroxysm lasting about two days.

September 24, 1895. Incision made as in Case I, and search instituted for the gall-bladder. This organ could not be found, and finger was passed to the region of common duct. Here a mass, seemingly the size of an English walnut, was readily discovered near the entrance of the duct into the duodenum. An exploring needle was passed into the tumor and found to pass with some resistance, but quite readily. This indicated carcinoma, but the circumscribed and movable character of the lump sustained the diagnosis of stone. The tissues intervening between the finger and the mass were incised, and touch immediately detected the presence of a large calculus. Wound very deep and partially filled with blood, hence sight was of no avail. The calculus, after considerable manipulation was turned out, and proved to be about the size of a robin's egg. Finger reinserted into the caiber of the duct, and a row of calculi, extending upward toward the liver, discovered. They were taken away as rapidly as possible and numbered over thirty, one being about one-fourth the size of the large one.

The finger readily explored the common duct on both proximal and distal sides, the confluence of the cystic with the hepatic duct being quite noticeable, the cystic duct, however, was extremely attenuated, while the hepatic was much enlarged, being, in fact, a reservoir for stones. It was very capacious and permitted easy digital exploration. A probe was passed into the duodenum and all obstruction found removed. No attempt at deep stitching was done, as the operation had consumed over an hour's time, in consequence of the difficulties naturally connected with the procedure. A glass drain was inserted in the duct and surrounded with iodo-gauze, made to project from the abdominal incision. A counter-opening also was made in accordance with a suggestion offered and discussed by Rutherford Morison,¹ who recommends draining such

cases through "a pouch (lying) between the right lobe of the liver and the gall-bladder."

External wound closed with worm-gut sutures. Pulse ranged from 120 to 140 for two days. Temperature not high. Very deficient urinary secretion for first few days, but this was overcome by application of hot stupes to region of kidneys. Pulse came down to 112. Food was retained and relished. No tympanites. Abdomen soft and relatively free from tenderness. Bile drained nicely, golden-yellow in color. Gauze packing withdrawn on the third day and the glass drain removed on the sixth. On October 2d (eighth day), the pulse and temperature began to rise, the former in twenty-four hours reaching 160, and the latter 104° . Stupor developed. No apparent trouble with the drainage. No evidence of general peritonitis. Tube through counter-opening withdrawn and contiguous territory irrigated. No change for the better occurred, and patient died October 3d (ninth day).

The autopsy showed absence of general peritonitis, but much injection and some purulent exudate in neighborhood of the Morison pouch. The biliary drain-canal was completely shut off from the peritoneal cavity. A remarkable feature of the *post-mortem* was the inability of the pathologist to find even a trace of the gall-bladder. It had undergone inflammatory change to such an extend as to result in obliteration, the dilated hepatic duct, as noted by the finger, *ante-mortem*, having acted in the capacity of a vicarious reservoir. Seven more stones of ordinary size were found in the hepatic duct. The death of this woman, after such hopeful post-operative indications, was due, in my opinion, to ptomaine intoxication, from external infection through the counter-opening.

My comments are three in number and are brief:

1. Surgery offers hope of succor to many people who hitherto have suffered without thought of relief. Cholelithiasis is a common malady, in fact, very common, many persons being possessors of stones without their knowledge. These people are walking unconsciously in the shadow of a real danger, which is liable to present itself at any time. When that danger does come, it may be met by surgical interference.

2. Action should be prompt, if the best results are to be expected. In cases like No. II., it is unwise to tarry, for while in this case death seemed to be due to causes disconnected with the question of early or late interference, who can state that the low ebb in the patient's health and strength did not contribute in a material way to the demise? That beautiful theory of Metchnikoff, phagocytosis, may have had more to do with the unfortunate outcome in this case than we know. Surely an agency which depresses general health would diminish cellular resistance to microbic invasion as well, and thus assist in the destruction of life. At any rate, deathbed operations are to be discountenanced.

2. The rational treatment of cases like the foregoing, as in any case of surgery, consists in the removal of the cause, and that as speedily and safely as possible. The use of the Murphy button was not indicated in either of these cases, for while its employment in the first case might have been followed by the passive discharge of the

¹"On Gall-stones." *Annals of Surgery*, vol. xxii, page 181. (August, 1895).

calculi through the intestinal fistula, it can not be denied that such happy result might possibly *not* have obtained. At any rate, the taking away of these stones was better than trusting that they might be washed away, as much better, in fact, other things being equal, as activity is better than passivity. But in cases like the second, viz.: *ductus communis* impaction, the button could not possibly work a cure, for the stone would remain to cause more or less future trouble.

In conclusion, I would state that in my opinion the employment of the Murphy button as a remedial measure in disorders of the biliary passages, should be limited to cases of permanent, non-lithic obstruction of the *ductus communis choledochus*, except where both bladder and common duct are stone-laden and the danger of the double operation necessary for relief is considered greater than the liability of future difficulty after its use.

A LABORATORY STUDY.

LIQUID PEPTONOID.

BY ALBERT R. LEEDS, PH.D.,
OF HOBOKEN, N. J.;
PUBLIC ANALYST OF NEW JERSEY.

IN THE MEDICAL NEWS of December 21, 1895, there is an article with the above title, by Dr. A. L. Benedict.

I desire to add the following observations to those made by Dr. Benedict, and confirmed in a postscript by Dr. Leffman, in relation to the small quantities of proteids exhibited by this preparation.

In connection with the reports upon the foods of infants and invalids, which I have made to the State Dairy Commissioner during years past, I have repeatedly examined the Liquid Peptonoids and have published its composition, stating not only the presence of proteids, but their percentage amount.

Since seeing Dr. Benedict's article I have obtained original packages of the Liquid Peptonoids, and subjected it to qualitative tests as well as quantitative analysis.

Dr. Benedict's observations on the character of Liquid Peptonoids are based practically on qualitative tests, and these tests were applied directly to the samples experimented on.

Inasmuch as my previous analyses had shown that the Liquid Peptonoids is composed of a number of substances besides proteids, and these substances many times larger in quantity, might interfere with the reaction for proteids as usually applied, I adopted the following procedure: The alcohol, which makes up a fifth of the bulk of the preparation, was distilled off, and the aqueous solution remaining behind was submitted to the tests. As it was strongly acid, there was reason to suspect that the precipitation of albuminates would be prevented by their solubility in an acid solution, and this was found to be the case. But by cautious addition of the Rittausen solution of copper sulphate, in amount sufficient to precipitate only a fraction of the albuminates present, followed by the Rittausen solution of potash, a flocculent precipitate of albumin containing some gelatin was obtained. After filtering off this precipitate, the Biuret test was applied in the usual

manner and gave the rose color characteristic of peptone. The addition of concentrated sulphuric acid developed a deep claret-red color. Mercuric chlorid, phosphomolybdic acid, and tannic acid, gave abundant white precipitates. In order to demonstrate qualitatively the presence of gelatin in the filtrate, it was concentrated by evaporation, and while still hot, solid crystallized ammonium sulphate was added to saturation and then the sulphate was just re-dissolved by boiling water. An abundant sticky precipitate of gelatin was thus thrown down and attached itself to the sides of the evaporating dish and rod used in stirring.

Quantitative analyses gave the following results:

Alcohol by weight	15.99	per cent.
" " volume	19.68	"
Albumin	0.182	per cent.
Gelatin	0.262	"
Peptone	0.377	"
Total proteids	0.821	per cent.
Maltose	4.735	per cent.
Sucrose and lactose	5.16	"
Total carbohydrates	9.895	per cent.
Hydrochloric acid	0.034	"
Ash	0.205	"
Total solids	10.921	

So it appears plainly that the reasons for the negative results of Dr. Benedict's tests for proteids was due to the very dilute solution of the proteids in association with the other bodies, the proteids actually forming less than one-tenth of the whole solid content.

Liquid Peptonoids is stated to contain the albuminoid principles of beef, milk, and wheat, entirely digested and ready for assimilation. So, in the light of this statement and of the name itself, it is not unreasonable to expect such Liquid Peptonoid to contain a preponderance of albuminoids in its constituents. Ordinary market milk contains, on an average, 3.75 per cent. of albuminoids, of which 0.75 per cent. is non-coagulable albumin and peptone. Should not a preparation of predigested milk contain considerably more than 0.75 per cent. of albumin and peptone? Here we have a preparation of predigested *beef, milk, and gluten*, with only 0.821 per cent. of protein matter.

In the analyses previously published¹ I found over two per cent. of proteids, and other published analyses, one, I think, by Dr. Chittenden, stated two and a half per cent.

It is evident, therefore, that the present preparation is far below the standard of the original, containing only about one-third of its original proportion of albuminoids.

In the State Report, the objection was made to this preparation that it contained too small a percentage of albuminoids to justify the claims that were made in its behalf. The present composition, as disclosed by this analysis, only the more strongly sustains this criticism.

I believe that peptone has a peculiar value in nutrition; may be of incalculable value as compared to food in its ordinary form, and so, even in small quantities, of the greatest benefit to the sick. But however high the factor of peptone may be as a nutrient, a preparation advertised

¹ See Report N. J. Dairy Commissioner for 1887.

to "contain the albuminoids of beef, milk, and glutin, in an entirely digested form," is seriously deceptive in its character when it contains but 0.821 per cent. of total proteins of all kinds, and is far below a reasonable and easily attainable standard.

I have been severely criticised, and frequently threatened with legal prosecution and large punitive damages, for publishing analyses of some infant and invalid foods, and for saying what appears to me to be the truth concerning these foods; but I am of the opinion, nevertheless, that these manufactured foods should be the concern of the various boards of health, with as great benefit to the public, no doubt, as in the regulation of the production and sale of beef, milk, etc.

MEDICAL PROGRESS.

Recovery from Focal Epilepsy Following Removal of Subdural Sarcoma.—CZERNY (*Münchener medicinische Wochenschrift*, 1896, No. 11, p. 241) has reported the case of a stonemason, forty-one years old, who at the age of thirteen years was rendered unconscious by a blow upon the occiput with a stone. At the age of thirty-four years, severe headaches set in, followed soon by twitching at first in the left leg, and subsequently involving gradually the remainder of the left side. For a time the attacks were controlled by bromids, but subsequently they recurred with increased severity and involving also the left upper extremity and left side of the face. In addition to these minor attacks, the man had major ones, lasting for twenty minutes, in which consciousness was lost. Operation was at this time proposed, but not assented to. Upon coming under observation some eight months later, examination disclosed two fingers' breadth to the right of the median line, and a finger's breadth above the transverse sinus a non-adherent cicatrix of the scalp. There was no optic neuritis. Sensibility and motility were practically alike on both sides; there was, however, slight impairment of the muscular sense on the left. There was a sense of restlessness and a feeling of fear and formication upon the left side. The memory was impaired. While under observation, a severe convulsion occurred, beginning in the left leg, progressively extending to the left arm and the left side of the face, followed by general twitching of the whole body, tonic spasms and loss of consciousness for a quarter of an hour, followed by mental confusion. A diagnosis of cortical tumor of the brain was made and operation undertaken. A tongue-shape flap with its base toward the ear and its apex toward the median line was turned back from the right parietal bone in a situation corresponding to the upper extremity of the Rolandic fissure. The dura, which was dense and scarcely pulsated, was incised and a flap turned back. Corresponding to the upper extremity of the ascending parietal convolution, was a bluish-red, circumscribed, nodular tumor measuring $1\frac{3}{4} \times 1\frac{1}{2} \times 1\frac{1}{3}$ inches attached to the inner surface of the dura and to the falx. Anteriorly, extending forward to the ascending frontal convolution, was a cyst as large as a hazelnut filled with serum. The tumor was only slightly attached to the

brain, posteriorly, and was easily dissected away, with little hemorrhage. Following the operation, tonic spasm and twitching appeared in the extremities of the left side, and for a time the patient was extremely irritable; but in the course of a month the wound had almost healed and the patient was able to get out of bed. A slight suppurating fistule remained for a time. Six or seven weeks after the operation, a further convulsion occurred, which was not repeated, however, after the evacuation from the wound of a small accumulation of pus. Upon histologic examination, the tumor proved to be a spindle-cell sarcoma arising from the dura.

Paroxysmal Laughing Spasm.—At a recent meeting of the Psychiatric and Neurological Society of Vienna, INFELD (*Wiener klinische Wochenschrift*, 1896, No. 10, p. 179) presented a man, thirty years old, who for three years had been having attacks of laughing spasm. These occurred at first at intervals of two or three months, gradually increasing in frequency to sixteen in the day. Some diminution followed treatment with bromid, which, however, was suspended as the attacks again increased in frequency, and the patient's memory began to suffer. The attacks occurred especially between nine in the evening and half-past six in the morning, and in greatest frequency between five and half-past six. Some occurred also during the day, however the patient happened to be occupied. In the intervals between the attacks, and immediately before and afterward, the man was perfectly well. The attacks set in with a sense of formication arising from the toes of the left foot, and the patient would fall to the ground unless he could reach some place to lie down. When this feeling reached the level of the left nipple the patient lost consciousness briefly, for two seconds, he estimated. Then followed tonic spasm, beginning in the lower extremities with strong dorsal flexion of the foot and toes, and successively extension at the knee, slight flexion of the thigh, at times deflection of the head to the right, slight adduction and abduction of the arms, flexion and pronation and supination of the forearm and the hand, flexion at the wrist, and extension of the fingers. The spasm was less pronounced on the right than in the left. Often the patient lay upon his face. The mouth and eyes were closed spasmodically, the eyeballs turned upward; the pupils were dilated and unresponsive to light. At the height of the attack the patient at first smiled, and then laughed aloud without other sign of merriment. The entire attack occupied about two minutes. On two occasions there was protracted loss of consciousness. The patient had suffered numerous injuries from falls, and his tongue presented several scars. Sometimes the sensory phenomena appeared without the motor, and several times it was possible to abort the attack by constriction of the left arm with a ligature. Improvement followed the administration of potassium bromid, in doses gradually increased from 90 to 225 grains daily. At the age of fifteen years the patient had suffered injury of several fingers, of the right thigh, and of the right side of the face. He had for a year or more, several years before his attacks began, indulged in alcohol to excess, and had been much depressed by the death of his father. On one occasion he had tem-

porary loss of use of the right leg. The case was believed to be one of minor epilepsy.

Carcinoma of the Rectum in a Youth of Thirteen Years.—CZERNY (*Münchener medicinsche Wochenschrift*, 1896, No. 11, p. 241) has reported the case of youth, thirteen years old, who presented in the rectum, just below the promontory of the sacrum, a tongue-shaped tumor, attached posteriorly, and ulcerated upon its inner surface. A small piece removed presented the arrangement of a cylinder-cell proliferation, and on account of the age of the patient a tentative diagnosis of papillary adenoma was made. Radical operation was, however, advised. The tumor had been in process of development for six months. The rectum was resected for a distance of $2\frac{1}{2}$ inches in conjunction with osteoplastic division of the fourth sacral vertebra. The carcinomatous ulceration involved the rectum for a distance of an inch and a half, and extended through the muscular into the serous coat. All of the involved structures were removed, but the circular suture of the intestine failed to hold securely, so that a small fecal fistula resulted.

Percussion of the Heart with the Body Bent Forward.—From a clinical study GUMPRECHT (*Deutsches Archiv für klinische Medicin*, B. lvi, H. 5, 6, p. 491) has found that the absolute cardiac dulness is increased in extent, intensity, and resistance, by inclining the body forward during the act of percussion. While this dulness often disappears in the dorsal decubitus as a result of pulmonary emphysema or gastro-intestinal tympanites, it is demonstrable when the body is inclined forward. With the aid of this procedure otherwise unrecognizable hypertrophies of the heart are rendered diagnosticable, and especially the left-sided hypertrophies of age masked by pulmonary emphysema—such as those associated with arterio-sclerosis or contracted kidney—and less commonly right-sided hypertrophies.

THERAPEUTIC NOTES.

In the Treatment of Membranous Dysmenorrhea.—LYONAIS (*Médecine Moderne*, 1896, No. 25, p. 198) recommends the following plan of procedure: For the pain of the paroxysm the usual sedatives may be employed; of especial use are cannabis indica, sodium salicylate in doses of from 15 to 120 grains in twenty-four hours, enemata of camphor and opium, of chloral, suppositories of opium, antipyrin, etc. No remedy, however, equals the hypodermic injection of morphin hydrochlorate given in doses of $\frac{1}{6}$ or $\frac{1}{3}$ grain night and morning until the membrane is expelled. For two or three days preceding the menstrual period vaginal injections of hot water (118.4° F.) may be practised. In the intervals between menstruation, if the cervical canal is constricted the incision of Sims may be made, or dilatation attempted with bougies or laminaria tents. The uterine mucous membrane may require curetting or cauterization. Displacements of the uterus, fibroid and other tumors, will require appropriate treatment. If the adnexa be diseased their removal may be seriously considered. Sometimes the pain disappears spontaneously or as a re-

sult of conception when due to arrest of development of the uterus. Under these conditions benefit may result from hot foot-baths, vaginal injections at a temperature of 114.4° F. and emmenagogues. When a diathetic state coexists iodin in alcoholic solution with tannic acid, or with potassium iodid may be employed together with cod-liver oil, arsenic, alkalies, etc., especially in cases presenting lymphatism, scrofula, defects in development. In some cases hydrotherapy and electrotherapy prove serviceable.

The Antiseptic Action of Subnitrate of Bismuth.—The *British Medical Journal*, April 4th, quotes CARLES in the *Archives Cliniques de Bordeaux*, February, as opposing the theory that subnitrate of bismuth has a merely mechanical action. Gayon and others have proved that it has a powerful bactericidal action, and the author found that an easily decomposable solution containing subnitrate of bismuth keeps indefinitely. Gosselin and Heret have found it useful for cleansing putrid wounds. To understand its action when given internally one must remember that the purest specimen tends to split up into bismuth oxid and nitric acid when in contact with water. (1) Action on the stomach. The oxid, which is in excess of the acid, acts first as a detergent to the gastric mucous membrane and precipitates the mucus, and, secondly, by its special germicidal power. The nitric acid has a tonic astringent and also a special antiseptic action (Duclaux). (2) In the intestine it meets with sulphured hydrogen gas, which converts it into black sulphid, thus liberating a further portion of its acid, which is again partially transformed into nitrous vapors, the antiseptic action of which has been proved by Girard and Pabst. For these reactions to take place it is necessary (1) that the subnitrate should be pure and not mixed with carbonate; (2) that it should be as finely powdered as possible. This latter point is easily proved in the laboratory. Thus it is not necessary to give up this old remedy for the newer, the salicylate, which costs twice as much.

The Treatment of Diffuse Bronchitis in Infants by Means of Warm Baths.—At a recent meeting of the Académie de Médecine RENANT, (*Médecine Moderne*, 1896, No. 25, p. 198) recommended in the treatment in diffuse bronchitis in children systematic bathing, every three hours, in water at a temperature of 100.4° F. for seven or eight minutes, if the bodily temperature reaches 102.2° F. or more. As a result, as observed in more than a hundred cases, the fever soon declines and the bronchitis yields. Quinin sulphate or hydrobromate was employed in tonic doses as an adjuvant. In cases of capillary bronchitis, in which the temperature rises high (104°–105.8° F.), the temperature of the bath may be reduced to 95° or 96.8° F.

For the Pain of Gastric Ulceration.—

R	Exalgine	45 grains.
	Extract of belladonna, { aa	5 grains.
	Codein, phosphate. }	
	Sugar of Milk	75 grains.
	Mix and divide into ten cachets.	

Dose, one to be taken with the onset of pain.

BOAS.—*Semaine Méd.*, No. 18.

THE MEDICAL NEWS.

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OF MEDICAL SCIENCE.

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SATURDAY, MAY 30, 1896.

THE BROOKLYN JENNERIAN CENTENNIAL.

THE celebration at Brooklyn on the 14th inst. was a "red letter" evening. The two distinguished invited medical guests, Drs. Pepper and Welch, did not fail of their promise to attend, and made addresses worthy of their standing and of the occasion. Dr. Pepper especially, was masterly in his presentation of the case in favor of vaccination, and, in part, said: "Too much attention cannot be paid by us to the worth of Jenner. Very few of us have the desirable amount of knowledge concerning Jenner's life as a man and an original investigator, and his immortal discovery. To him is due that extreme and rare credit of having devised the incalculably valuable scheme of close and patient observation, without which great discoveries in the realm of science are a hopeless dream.

"Jenner's discovery has removed a scourge from the face of the earth. But think how many others still await solution at our hands! Their solution depends upon the methods he put into such successful operation. I have taken the trouble to secure a few statistics of preventable

deaths in Philadelphia for the past twenty years. The result is startling. There were 55,000 deaths in that city alone in that time from tuberculosis, 11,500 from typhoid fever, 8000 from scarlet fever, and 155,000 from various infantile causes, all of which must be included in the list of preventive diseases. If we should personally practise preventive medicine, I am certain our services would be vastly greater to suffering humanity than ever before. It is a higher medicine than that which seeks to quell contagious disease after it has spread over our cities and eaten into the vitals of the people. This is a very serious matter and needs deep thought. We ought to get it planted in our schools and public libraries.

"Municipal and national preventive medicine is also our great need. How much do municipalities appreciate this? How many laboratories do our cities endow? I tell you, that to-day the medical profession is the only profession which is trying forever to restrict its own field of effort and emolument. Yet, when it tries to secure government or city cooperation, it is set upon as if it were trying only to secure personal gain. We should unite in insisting upon the immense importance of these subjects—health, the prevention of disease, and epidemic. Here, in this aggregation of population, soon destined to be the second greatest city in the world, is a magnificent opportunity. Let it lead in showing the world its zeal for the succor of humanity. This is, moreover, a national question. Cities cannot deal largely enough with questions of quarantine, the pollution of the sources of water, the pollution of our coast waters and the poisoning thereby of our sea food product. Then there are the great domestic food crops and our food animals. I do not want more centralization in Washington, but modern preventive medicine demands national control. We must speak strongly for humanity and demand recognition for these things. Remember that our duty is to force this question into immediate public recognition."

Dr. Welch chose for his subject the scientific bearings of Jenner's discovery, and its logical consequences in the development of preventive medicine. He characterized the discoverer of vaccine as a thoroughly trained scientific man. "He knew pathology, and knew it well. His inves-

tigations were entirely of a scientific character, and no man in medicine has been less selfish in his work. Jenner was the first physician to make a *post-mortem* examination in the case of angina pectoris, and the discovery of its nature was really due to him. His careful investigation convinced him of the accuracy of his opinion that it was merely an ossification of the coronary arteries. That little monograph of Jenner's on vaccination is one of the classics of the language. It takes rank with Harvey's essay on the heart. It illustrates perfectly his far-reaching, painstaking observation, and his careful study of every aspect of this subject. Dr. Pasteur, whose great discoveries in our own time have electrified the medical world, gives full credit to Jenner as the source of his inspiration. The theory of preventive medicine is to-day a principle as likely to be as beneficent to humanity as that discovered by Jenner. All of our great discoveries rest on the application of experimental method in medicine. They rest on experimentation on animals; vivisection, if you like it. But it is a necessity. There has never been a time in which great discoveries in medical science have been possible, except through the agency of experimentation. Your society has shown an enlightened spirit in recognizing this opportunity to honor the memory of Jenner, and I thank you for the privilege that you have extended to me to participate in doing honor to his memory."

The memorial medal, given to each guest, is of bronze, and fitly commemorates the occasion. The menu of the banquet quotes Scriptural text as applicable to the great sanitary pioneer: "He stood between the living and the dead, and the plague was stayed."

TUBERCULOSIS OF THE KIDNEY.

THERE is increasing evidence that tuberculosis of the kidney, both primary and secondary, is commoner than the frequency of its recognition heretofore would lead one to believe. The importance of early detection, particularly if the lesion is primary or localized, must be obvious, as a number of recent observations have demonstrated the possibility of perfect recovery as a result of radical surgical intervention. The diagnosis depends essentially upon the detection of

tubercle-bacilli in the urine, obtained, if possible, directly from the ureter of the diseased organ. The early symptoms may fail entirely to attract attention. As the case progresses these are likely to assume the characters of those due to inflammatory lesions involving the part affected. The most conspicuous manifestations ordinarily are pain in the loins, often paroxysmal in character, and much like that of renal colic, together with the passage with the urine of blood and the *debris* of disintegrated tissue. Ultimately, constitutional symptoms appear, perhaps with evidences of extension, and often late in the progress of the case a swelling in the loin may be detected on palpation. When the affection, especially if primary or localized, can be recognized the remedy lies in resort to surgical measures, and in accordance with the conditions present these will consist principally in nephrectomy or nephrotomy. In a recent communication emanating from the Pepper Laboratory of Clinical Medicine, Hamill¹ considers this subject in its various clinical aspects and reports fifty-five cases that he has collected from the literature. Operation was performed in seventeen of this number, with the following results:

	Cases	Improvement	Recovery	Death
Nephrotomy...	4	1	2	1
Nephrectomy...	9	1	5	3
Nephrotomy followed by nephrectomy...	4	1	2	1

These results must be viewed as in the highest degree assuring and should stimulate the clinician to an early diagnosis.

An additional case illustrating the success attending early recognition and radical treatment of tuberculosis of the kidney has recently been reported by Casper (Berliner klinische Wochenschrift, 1896, No. 17, p. 369). The patient was a woman, forty-two years old, without hereditary predisposition, who for six months had complained of symptoms of vesical catarrh, to which became added pains in the right loin, together with a sense of abdominal tension. Varied local treatment proved unsuccessful. The urine was

¹ "Primary Tuberculosis of the Kidney, with Especial Reference to Its Manifestations in Infants and Children," p. 35. Philadelphia, 1896.

slightly turbid and of acid reaction with a specific gravity of 1018. It contained numerous pus-corpuses and ciliated epithelium, but neither blood-corpuses nor tube-casts. A small quantity of albumin also was present. In the centrifugated sediment tubercle-bacilli were found. Upon cystoscopic examination the interior of the bladder appeared normal except in the situation of the right ureter, whose opening could not be seen. In its usual site was a diffusely reddened elevated area in which blood-vessels could not be recognized. The urine from the left ureter appeared clear and normal, while none could be seen to issue from the place where the right ought to have been, although from time to time a few drops collected in this situation. The left ureter was readily catheterized with the aid of the ureterocystoscope and the urine obtained proved to be normal. After a number of unsuccessful attempts to enter the right ureter the catheter disappeared beneath the mucous membrane of the bladder and was readily pushed further onward. The urine thus obtained resembled that found in the bladder, being turbid, purulent, and albuminous. Upon the first examination tubercle-bacilli could not be found, but at a subsequent examination their presence was conclusively demonstrated. A diagnosis was therefore made of tuberculosis of the right kidney, with circumscribed involvement of the bladder. Accordingly nephrectomy was performed, with the recovery of the patient. The removed kidney presented tubercles upon its surface and two caseous nodules in its parenchyma.

THE INCREASING LACK OF ESPRIT DE CORPS IN THE MEDICAL PROFESSION.

IT must be apparent to any thoughtful mind that the medical profession is fast drifting away from its ancient ethical standards. In some respects this is well, for those standards were instituted when the conditions of social life were far different from those which now obtain. Because of the supposed greater intellectual attainments which belonged to a certain decorum and dignity formerly inhered in them all the so-called learned professions when compared with the trades and handicrafts. Such a system fostered shams, it is true, and placed many men before the community at more than their real value. The medi-

cal profession was not peculiar in this respect, for quacks and sharpers and hypocrites were to be found in the other learned professions also. Furthermore, the rigid ideas of the earlier days helped to keep within conventional lines some who might otherwise have gone astray, and these ideas were not regarded as burdensome by those who had no disposition to wander.

When the general average of intelligence was advanced, when greater tolerance for differences of opinion prevailed, and when the law of the commonwealth established one standard of requirement for all who engaged in the practice of medicine, allowing latitude of opinion in matters non-essential, the era of greater liberty of action was ushered in. We do not as yet fully realize the advantages of such a situation. With the era of greater liberty has come a distinct lowering of ethical standards in the reciprocal relations which physicians hold to each other, a tendency to regard the art medical as not much more than a trade, a means of obtaining a livelihood, a means of making money. If the art medical is all of these, which is quite true within certain limits and with certain individuals, it is also much more than these. It is indeed the means by which physicians gain their livelihood, support their families, and make provision, in the rare instances in which it is possible, for old age; but it is no better than the dirtiest and most slavish kind of a trade, if instead of developing character and making one broad and humane, it debases one into a mere money-getter, a sordid, avaricious seeker for selfish advancement with no generous thoughts or impulses for others who are working in the same field. It is deplorable that there are physicians in this city, not to mention a like possibility in other communities, who, if reports are to be believed, not only expect but demand fees for services rendered to fellow-physicians or those who are immediately dependent upon them. A sense of gratitude and propriety should certainly inspire those who are able to make compensation for conspicuous services rendered. Only a small-souled or an excusably impudent man would be unmindful of such an obligation, but even then the requital should come only as an expression of gratitude, never as a fee which was required.

It is time that the profession showed greater solidarity in these matters. It is time that the mere money-getters be allowed to be isolated from those who believe that the cultivation of fellow-feeling, broad charity, and generous impulses within the profession should not be allowed to degenerate into a lost art.

ECHOES AND NEWS.

THE principal Medical Libraries of New York City consist of the N. Y. Hospital Library, 25,000 volumes, the Library of the Academy of Medicine, 45,000 volumes, and 15,000 volumes devoted to medicine in the Mercantile Library.

THE Faculty of the New York Polyclinic Medical School and Hospital has appointed Dr. W. W. Van Valzah Professor of General Medicine and Diseases of the Digestive System and the Blood. Dr. J. Douglas Nisbet has been appointed Adjunct Professor to the same chair.

IN 1888, W. E. Smith invented the drop-frame bicycle and built one for his wife. Mrs. Smith's first wheel weighed sixty pounds. She herself tipped the scales at eighty. Since then she has gained forty pounds, and her wheel has lost exactly the same amount—which says a great deal for the evolution of both women and bicycles.

ONE hundred years ago, May 14, 1796, Dr. Jenner first performed the operation of vaccination in England. The civilized world recognizes this as the greatest discovery in preventive medicine of all time. And yet in England to-day there is raging at Gloucester a most virulent epidemic of smallpox. What a commentary it is that the perverse folly of a small but noisy band of faddists has been able to bring such a scourge upon a large and prosperous community.

THE Milwaukee contention over vaccination in the public schools has happily been placated. The suit of John Schierf against the School Board has been withdrawn from the Supreme Court; no costs to either side. The School Board will be free hereafter to enforce the rule requiring that every pupil shall give evidence of a successful vaccination before admission to the public school.

THE MEDICAL SOCIETY OF WESTCHESTER COUNTY, N. Y., celebrated its one-hundredth annual meeting on the 20th instant.

IT is estimated that from eight to twelve millions of dollars will be saved the United States Treasury annually by repealing the measure relating to free alcohol for the arts and sciences.

PROFESSOR LOMBROSO has expressed his belief that Dante was insane, and that the visions depicted in his "Inferno" are those from a disordered brain and should not be considered emanations of genius.

THE serious illness of Sir J. Russell Reynolds of London, is almost as deeply regretted by the medical profes-

sion in America as in England. It will be learned with pleasure by his many admirers here that his symptoms are more favorable and hope is now entertained of his early recovery.

IT is stated that the prime cause of the recent fatal illness of Archduke Karl Ludwig of Austria, brother of the emperor, was found in the water of the river Jordan, which he drank as a matter of religious devotion.

THE profession is gradually purging itself of quacks and mountebanks. An Italian, Cacciola by name, has been arrested for practising medicine in Brooklyn without a diploma or certificate of registration, and the Pennsylvania State Medical Society has succeeded in convicting a notorious female quack in Pittsburg on a similar charge.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE will hold its meetings this year at Toronto, Can., commencing August 18th. The last meeting in Canada was in 1884, at Montreal.

IT is rumored that the British army authorities are about to make a number of concessions to the members of the medical staff. The English medical journals are inclined to look with suspicion upon these promises, and point to an established disposition on the part of these authorities to forget them as soon as the ranks are well filled from the applicants they have attracted.

DR. CHARLES F. CHANDLER, Professor of Chemistry in the Columbia School of Mines, New York, has completely recovered from an attack of appendicitis, which prostrated him six weeks ago. The attack came without warning. He arose in his usual health, but before noon was seized with severe pains, which were diagnosed at a consultation of physicians a few hours later as those of appendicitis. The next morning the diseased appendix was removed. Apparently at no time after the operation was he in danger, while the operation seemed necessary to save his life.

A DISPATCH from Cairo, Egypt, says that a cholera miasm, similar to that of 1883, overhangs the city. It is accompanied by a heavy, hot atmosphere. The virulent form of the disease has hardly ever been paralleled at such an early stage. The deaths are about ninety per cent. of the seizures.

MORITZ PRONT, the nineteen-year-old boy who has been in a cataleptic trance since April 27th, remains in his strange condition at the Beth Israel Hospital in East Broadway, New York City. The starvation treatment, so-called, has been stopped, and the boy is being fed again artificially at regular intervals. He is apparently very feeble but the prognosis is favorable.

ON May 22d a memorial meeting under the auspices of the Montgomery County Medical Society was held in the Court House at Norristown, Pa., as an expression of respect for the late Dr. Hiram Corson. Speakers were present from Philadelphia, and much feeling was displayed in honoring the memory of one whose worthy life had endeared him to the noblest of his fellow-men.

DRS. HENRY W. CATTELL and Thomas J. Morton have been appointed coroner's physicians for Philadelphia to succeed Dr. William K. Mattern, deceased, and Dr. H. L. Sidebotham, resigned.

IT has been determined by a Russian bacteriologist that coffee is, to a limited degree, a disinfectant. This quality is not dependent upon the active principle of the bean, but develops in some manner during the process of roasting. Watery infusions of the roasted coffee prove fatal to the cholera bacillus in a few hours, and after a longer time the typhoid fever germ also succumbs. This germicidal effect is much too slow to render this discovery of any real therapeutic value.

A VERY timely warning is given in *Médecine Moderne* regarding the popular use of extracts of Kola. This article is entitled "The Kola Delusion," and in its discussion the fact is pointed out that increased capacity for work obtained through its employment is temporary and unreliable, like that gained from alcohol and cocaine. In truth, the effect produced by every member of this group of drugs, which the author very aptly calls "nerve-foolers," in that they abolish the natural sense of weariness and fatigue, is due probably to an obtunding effect upon the nerve centers. That caffeine is closely allied to creatin and other tissue poisons which invariably give rise to a loss of energy when they have accumulated in the body, is a further suggestive observation.

THE Sisters of Mercy have nearly completed their retreat for consumptives in the Adirondacks. It is located upon a large tract of land presented to them by Dr. W. Seward Webb and Mr. Paul Smith, and is the choice site in the immense estates of these gentlemen. "Sunrise Mount," as it has been named, is two thousand feet above the sea, and surrounded by miles of pine forests and scenery unsurpassed. The cottage system is adopted. A most important advantage possessed by this sanitarium is accessibility. It may be reached without change of cars from most of the Eastern cities.

THE ST. LOUIS BOARD OF HEALTH made public the results of a trial of antitoxin in 326 cases of diphtheria. Of this number, only 15 cases died, showing a percentage of mortality of 4.6. Both the city of St. Louis and the promoters of antitoxin therapy are to be congratulated upon these excellent results.

PROMISING indications of establishing a hospital in the southern part of Brooklyn are found in recent meetings held by the influential citizens of that district. The larger hospitals of Brooklyn are much too remote to render prompt assistance to the poor of this populous region.

THE PENNSYLVANIA BOARD OF HEALTH has been clothed with power the exercise of which does not meet the approval of certain of the Philadelphia clergy. An act passed June 18, 1895, made it obligatory, under penalty of the usual fine, upon those in charge of all public, private, parochial, Sunday, or other schools to cause the children in attendance to present certificates of vaccination and to exclude and report such as were unable

to furnish the same. The application of this and other sanitary requirements to Sunday schools is thought by those in charge to be unnecessarily burdensome.

THE PENNSYLVANIA STATE MEDICAL SOCIETY held its forty-sixth annual meeting at Harrisburg, last week. The session was well attended, and its interesting program scientifically and harmoniously carried out. Dr. E. E. Montgomery of Philadelphia was elected president for the ensuing year. The next meeting will be held in Pittsburg in September, 1897.

CARL PENNINGTON FROST, M.D., LL.D., Dean of the Dartmouth Medical College and Professor of the Science and Practice of Medicine, died May 24th, at Hanover, N. H., of heart disease. He caught a bad cold last spring, and has not been able to be out except for short drives since then. He received the degree of A.B. from Dartmouth in 1852, A.M. in 1855, graduated from Dartmouth Medical College in 1857, and received the degree of M.D. from New York Medical College in 1859. Dr. Frost leaves a wife and two sons, graduates of Dartmouth, class of 1886, the older, G. D. Frost, M.D., Professor of Anatomy in Dartmouth Medical College, and the younger, E. B. Frost, Assistant Professor of Astronomy in Dartmouth College.

CORRESPONDENCE.

SEASICKNESS—A REPLY TO DR. ROCKWELL'S ARTICLE IN THE "MEDICAL RECORD" OF JANUARY 25, 1896.

To the Editor of THE MEDICAL NEWS:

Dear Sir: In reply to Dr. Rockwell's very efficient paper on the preventative treatment of "mal de mer," I would like to say a few words in defense of the ship's surgeon and give a few opinions as regards this most distressing malady.

The ship's surgeon labors under great disadvantages as regards his opportunities to allay the suffering of seasick passengers. In the first place, he never sees any of the passengers until an hour or so before sailing, and then he has but little opportunity to give any preventive whatsoever. Another difficulty is that many of the susceptible passengers become nauseated immediately they come on board, and cannot retain anything on the stomachs. Here is where hypodermic medication comes in very opportunely. An injection of one-quarter grain of morphia, combined with 1-100 of atropin, scarcely ever fails to relieve the patient after one repetition. The nausea is allayed almost immediately. I have tried it, not only in seasickness, but in the nausea caused by railway travel, and have every reason to believe that, if used in time, it will always prove to be efficient.

Seasickness is undoubtedly due to a disturbance of the central nervous system, caused by a partial paralysis of the vasomotor nerves. This paralysis causes a passive congestion of the brain, owing to the relaxed blood-paths, and produces the distressing dizziness, headache, and vomiting. To prove that the nausea is due to nervous irritation, the patient vomits with a clean tongue, unless

there is constipation present, when there may be a slight coating. What causes the primary nervous disturbance, we are unable to say. Whether it due to the odor of the ship, the sight of the heaving water, or to the rolling of the vessel, we are at a loss to know. I have seen persons seasick before we had left "yellow water" and before there was any swell at all. I have found that those who are of a so-called bilious temperament are much more liable to seasickness than persons who are of an opposite temperament.

I had tried the bromids before reading Dr. Rockwell's paper, several times, and found that they produced the desired effect. Chloral will also prove to be a good prophylactic. Patients for whom I have prescribed the above drugs have told me that they were not troubled in the least during the voyage by seasickness. Given in fifteen-grain doses, three times a day, for two or three days before sailing, will be found enough to produce the desired effect.

Knowing that there is a relaxed condition of the blood-paths and a nervous excitability, it stands to reason that the use of morphia for the nervousness and of atropia for a vasomotor stimulant are the proper therapeutic indications.

In closing, I would remark that, aside from seasickness, there is another condition to be combated by the ship's surgeon, which always occurs with "mal de mer," viz., obstinate constipation. Whether this is due to the inactivity among persons on shipboard or the seasickness, I cannot say, I know that it is sometimes a very difficult matter to make any ordinary purge given in usual doses to act, and very large doses have to be given. I have found the cascara sagrada, given in 5 ss doses, disguised by syrup of orange, at night, the most agreeable and efficient purge.

CHARLES S. BOWMAN, Surgeon.

ON BOARD S.S. ILLINOIS, ANTWERP, BELGIUM.
April 1, 1896.

COLLECTIVE INVESTIGATION IN PNEUMONIA.

To the Editor of THE MEDICAL NEWS:

Dear Sir: My two collective reports, already published, on "Ice-cold Applications in Acute Pneumonia," give a record of 195 cases so treated, with 7 deaths, or a mortality rate of 3.58 per cent.

Being desirous of making as full a report as possible on this subject, I take the liberty of asking those members of the medical profession who have tested this measure to kindly give me the result of their experience. Full credit will be given to each correspondent in the report which I hope to publish. Blanks for the report of cases will be furnished by me on application.

THOMAS J. MAYS, M.D.

1839 SPRUCE STREET, PHILADELPHIA.
May 1, 1896.

NEW METHOD OF ADMINISTERING CALOMEL.

To the Editor of THE MEDICAL NEWS:

Dear Sir: I have occasionally wished to administer a vigorous cathartic to one suffering with mania or other

mental disease, when the medicine could not be given by mouth without a struggle. A simple and effective expedient in such cases is to blow calomel into the nostril through a tube or roll of paper. The patient may be blindfolded, or, better, led to shut the eyes tightly, to escape having the application made directly to them, for such deception is certainly justifiable in some cases. The drug is nicely distributed over the nasal tract, finds its way into the intestinal tract, and operates as if given by mouth. It is not painful nor disagreeable, as I have demonstrated by personal trial.

Because I have never seen this little expedient mentioned, I send you this note, for it is of great value in certain cases.

Yours very truly,

J. N. HALL, M.D.

DENVER, COLO.,
April 30, 1896.

EXPANSION AND CONTRACTION METHOD OF FILTRATION.

To the Editor of THE MEDICAL NEWS:

Dear Sir: In a reprint from the *Boston Medical and Surgical Journal*, recently sent to me, dated April 25, 1895, I find that Dr. Louis F. Bishop of New York first applied the test-tube in the expansion and contraction method of filtration as given in his paper: "A Quick Method for the Filtration of a Small Quantity of Urine," which I considered original with me, as published in your issue of March 21, 1896.

A comparative study of the papers indicates that the fundamental principles of the theory are the same in both, yet in practical application mine is a simplification of his method.

Yours truly,

SAMUEL H. FRIEND, M.D.

MILWAUKEE, WIS.,
May 8, 1896.

COLORED MEDICAL DOCTORS AS ATTENDANTS IN INSANE ASYLUMS.

To the Editor of THE MEDICAL NEWS:

Dear Doctor: In the April 4th number of the MEDICAL NEWS in the "Echoes and News" column, page 387, there appears this statement: "Governor Bradley of Kentucky, has appointed Dr. B. F. Porter (colored), third assistant physician to the Lakeland Asylum. As he will have several wards containing white patients under his medical supervision, the governor has been receiving rather unpleasant criticisms throughout the State." I have seen no such criticism in the press of this State, although you doubtless have. I beg to call your attention to the fact, that the statement whatever its source, is absolutely untrue, and ask that you will kindly correct the error. Dr. Porter, an intelligent and reputable colored doctor, is the third assistant physician in this asylum, appointed by Governor Bradley. He was appointed to take charge of the colored patients, of whom there are over two hundred in this institution. He has never had charge of a white ward or white patient since he has been on service. His work and duties are exclusively with the colored patients, are entirely satisfactory, and his presence has not produced the slightest friction in the management and con-

duct of the affairs of this institution. I think it has come to be regarded as not an improper appointment, and really now is looked upon as a very correct and suitable arrangement to have a colored doctor to look after the interests of the colored patients, which he does with great zeal.

Very respectfully,

H. F. McNARY, Superintendent.

LAKELAND, KY., May 19, 1896.

[THE MEDICAL NEWS is gratified to know that the original statement is incorrect, and to give its unqualified approval to the arrangement as stated by Dr. McNary.—ED.]

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE. SECTION ON GENERAL MEDICINE.

Stated Meeting, April 21, 1896.

REYNOLD W. WILCOX, M.D., Chairman.

THE TREATMENT OF PULMONARY TUBERCULOSIS.

DR. IRWIN HOWELL HANCE read a paper on this subject. He said that prominent among the many drugs recommended for the treatment of this disease stood creosote. According to his experience, the most convenient and most efficacious method of administering this drug was by filling capsules with bismuth, and putting a few drops of creosote on the bismuth. By this method the dose could be readily adjusted to the every varying requirements of the patient, and one was always sure of administering the creosote in an active form. Ready-made capsules containing creosote were not reliable. Guaiacol had proved quite useful in the treatment of phthisis in doses of from five to fifteen minims. When given endermically, it sometimes caused dangerous depression of the temperature, with profuse perspiration. The writer said that he had used it hypodermically, and had seen very fair results as regards controlling the temperature. Guaiacol would probably never take the place of creosote. It was best given hypodermically in thirty-three per cent. solution of sterilized sweet almond oil. Hydrotherapeutics had been recommended by several observers—in this country, chiefly by Baruch. The most useful form of it for phthisical patients was the rain-bath, given at an average temperature of 65° F. The tuberculin treatment is still used by a few; (1) as a test for tuberculosis in the early stages; and (2) cautiously administered in small and gradually increasing doses until the disease process has been arrested. The writer believed that it could be safely used for diagnostic purposes, and he had used it in this way with satisfaction. He believed also that the patients who had been cured by the climatic treatment, together with the use of tuberculin, had greater power of resistance against subsequent infection than those treated by the climatic method alone. As to the climatic treatment, the author said the locality should be two thousand feet or over above the sea, with a sunny exposure, with comparatively slight variations in temperature, and where the air is free from such contamination as arises from a near-by city or town.

The reader of the paper divided phthisical patients into two classes; (1) the febrile, and (2) the non-febrile. The former, he said, required to be treated out-doors until the temperature remained practically normal for a number of weeks continuously.

These patients should be given constant exercise, but they should never be allowed to exercise to the point of fatigue. This treatment should be aided by good nourishment and the internal use of creosote and cod-liver oil unless the stomach rebelled. He insisted that the too common practice of deceiving phthisical patients always bore bitter fruit; it was much better to tell them the truth and advise them promptly regarding what was best to be done. If the patient had had hemorrhages, there was danger of recurrent hemorrhages, with the consequent exhaustion.

DR. BEYERLY ROBINSON said that while he was one of the first to call attention to the creosote treatment, he wished to disclaim any idea of originality in this connection. More than this, he believed that Bouchard had done more than any other one in establishing the creosote treatment for phthisis on a firm basis. Bouchard laid great stress on one fact of great importance, *i.e.*, that the creosote must be administered in an alcoholic solution. He had therefore begun the treatment by the administration of the creosote in glycerin and whisky. He had found that pure glycerin was often absorbed and assimilated by many persons in such a way as to take the place largely of cod-liver oil, particularly in summer. He had tried various forms of pills and capsules, but was convinced that the alcoholic solution was the best method. He felt that the Germans were wrong in the attempt to give extreme doses of creosote; it certainly could not be tolerated by many stomachs here in America. For the last three or four years he had used creosote in the form of inhalations, and with the greatest confidence. An alcoholic solution of creosote is added to hot water, and by means of a croup-kettle, or similar apparatus, the room is kept filled with the vapor of the creosote. The patient was directed to spend an hour or more, two or three times a day in a room filled with this vapor. When used in this way it occasionally caused an obstinate headache, and this could only be controlled by temporarily discontinuing the creosote. It was only when the creosote was pushed to the extreme limit that he had observed any deleterious effect on the kidneys. Still, it was well to test the urine once a week. He was not prepared yet to state how creosote acted; it was probable that it acted, (1) by promoting the general nutrition, and (2) by rendering the "soil" inimical to the growth of the tubercle bacilli. The fact that the soil was an exceedingly important matter was well shown by the many patients who retained the tubercle bacilli most obstinately in their systems, and yet for long periods of time they would be quite comfortable notwithstanding the presence of these microbes. Regarding the climatic treatment, the speaker said that patients did better in the high altitudes of Switzerland than in those of Colorado, particularly as regards a less tendency to hemorrhages. For patients who, when in health, dreaded cold weather,

he did not think the Adirondacks were suitable; it was much better to send them to Asheville, N. C., or to the sandhills of Georgia, near Augusta. He felt convinced that if proper sanitaria for consumptives could be established in this country in the vicinity of sulphur springs, it would be a decided advance. This was no new thing, for it was a common practice in France to send phthisical patients to such resorts. As he believed hydrotherapy was in the main too severe for phthisical patients, and had but little faith in it, he had had comparatively little experience with it.

DR. ANDREW H. SMITH said that we were justified in approaching a case of pulmonary tuberculosis with some degree of hopefulness. We should also realize that the tubercle bacilli almost never get an active hold except where the system is in an abnormal condition. From this it followed that there was an antecedent aberration from perfect health, and to this we should first of all direct our attention. Another point which he desired to emphasize was that the ideal treatment was made up of a mass of minute details, and that reliance was not to be placed on any one thing to the neglect of others. Anything which was likely to improve the general nutrition of the patient should receive the physician's earnest consideration. A minute study should be made of the individual requirements as to diet; it was quite possible to overfeed these patients, and do them harm thereby. Where the stomach was inadequate for the demands made upon it he had resorted to rectal alimentation with great satisfaction. He cited one case in particular, of very advanced phthisis, which had been marvelously improved when almost at death's door, simply by the use of enemas of defibrinated beef-blood. All the usual methods of treatment had been previously tried, together with the rest and other advantages which a good hospital could afford, yet no improvement had been noticed until the adoption of the rectal feeding. He had seen the ability to take and assimilate food very decidedly increased by the use of oxygen inhalations. In his opinion, the condition of the blood should be more carefully studied than is usually the case. The florid appearance of the face often misled the physician into the belief that the blood was in good condition, whereas, in reality, there might be present a condition of extreme anemia. Another therapeutic resource which he considered of benefit was pulmonary gymnastics. If the catarrhal condition found in these individuals in the apex of the lung were controlled, the soil would be rendered less favorable for the tubercle bacillus. He believed that the benefit derived from the creosote was largely due to its action in checking the bronchial catarrh. Measures, which had for their object the free distention of all portions of the lung were calculated to do much good in a certain class of cases. Playing on wind instruments often acted beneficially in this way. The best results in the way of the climatic treatment in this country that he had seen had been in patients who had been sent to El Paso. The climate is exceedingly dry, and there are sand-storms there, but these did not seem to exert any pernicious influence on the phthisical patients. The only draw-

back at present was the lack of proper hotel accommodations.

DR. S. BARUCH said he would regard it as very expedient to express any but a very guarded opinion regarding the patient's true condition until he was thoroughly acquainted, not only with the exact extent of the disease process, but also with the temperament of the individual. Minute attention to detail was important. The patient should be seen as regularly, if not so frequently, as a case of typhoid fever or pneumonia. It is just as important to keep a diurnal record of the temperature and other vital signs as in an acute disease. He was of the opinion that the successful treatment of phthisis stood upon the tripod—air, water, and diet. In view of the very varied climates usually recommended, he did not lay as great stress as many did upon the climatic treatment of pulmonary tuberculosis. Any climate which possessed a pure, dry air, and was free from dust, and moisture, and rapid variations of temperature, seemed to him to answer the purpose very well. The fact that a large number of the cases treated at the Montefiore Home, in an exposed situation on Washington Heights, gained decidedly in weight, and approved in general nutrition, was sufficient evidence that much good could be accomplished without change of climate. The "air" treatment consists in exposing the patient to fresh air day and night, as can be done in sanitaria. The cardinal rule should be that patients, with a temperature over 99.5° F., should not exercise at all, but should rest in the open air, and sunshine, while covered with warm clothing. The stimulating effect of proper hydrotherapy on the cutaneous vessels was beyond cavil. It could and should be done without shock. It was not safe to use water of a temperature below 65° F., or at a pressure below twenty-five pounds. Philadelphia cream cheese, which consists of the entire milk without the whey, was an excellent article of diet for phthisical patients. He had found that creosote usually disturbed the stomach, and was of but little value except for bronchial complications.

DR. HENRY P. LOOMIS said that he had never seen the beneficial results from tuberculin which had been described by Dr. Hance. There were certainly a larger proportion of hemorrhages at the Adirondack sanitarium than in many other similar places. He agreed with the reader of the paper that it was decidedly the best plan to tell the patient plainly and frankly the nature of his malady. He had become convinced that the method of employing creosote advocated in the paper was the best one, and he had used it for a number of years. The climate should be chosen in accordance chiefly with the individual temperament, rather than with reference to the disease. In his opinion the dietetic treatment came next in importance to the climatic treatment. He would divide the disease into three stages, with reference to the condition of the stomach, viz.: (1) Where no gastric disturbance exists; (2) when no solid food can be taken; and (3) from the time no solid food can be taken until the case terminates fatally. These stages, he had found, did not ordinarily correspond with the changes in the physical signs. In the first stage, three meals a day were not usually sufficient. The mat-

ter of stimulants had not yet received consideration in this discussion. He felt that in the first stage stimulants should be avoided, unless it be in the form of porter, taken with the meals. Stimulants are more useful in the last stage.

DR. WALTER JAMES said that nothing had been said about the importance of the patient's mental attitude toward his disease. He thought we must now admit that nervous or mental influences constantly interfere with or assist us in our efforts to battle with disease. Grief or sudden depressing influence seemed to him to be a common cause of exciting the disease to renewed activity. He believed that we should tell the patient plainly the nature of his disorder, for otherwise we could hardly hope to secure the necessary cooperation of the patient. The tuberculin of some years ago was a failure, yet there were elements connected with it which seemed to indicate that there might be yet much of value in it. The fact that phthisis was treated by creosote by so many different physicians in all parts of the world showed that the treatment must be of some value. Personally, he was of the opinion that, in addition to its beneficial influence on the general nutrition, there was some, perhaps slight, specific action. He had tried the effect of creosote on other cases than phthisis, in which the nutrition was defective, but had not observed the very decided benefit so commonly seen in phthisis. In some cases he believed that very small doses of codein or morphin were indicated in addition to the creosote in the early stages of the disease. In prescribing climate, we should select one materially different from that in which the patient had acquired his disease.

DR. ACHILLES ROSE said that he had been informed that in the Montefiore Home and other similar institutions there had been an alarming number of tubercular infections. This was certainly a serious disadvantage in such sanitaria.

DR. WOODS HUTCHINSON of Buffalo said that the whole trend of the discussion had been in favor of measures having for their object the increase of the resisting power—in other words, improving the strength and activity of the leucocytes. Phthisis, he said, was undoubtedly a disease of weaklings. Any climate, therefore, which would encourage the individual patient to live outdoors should prove beneficial. The same might be said of medicines, for almost everything in the *materia medica* had been recommended for this disease. Among the lower animals in their natural wild state, it should be noted that there was a special immunity to this disease. The same might be said of human beings, for the Indians of the Pueblos were subject to it, while the Indian in his native wilds was comparatively exempt from it. In the lung was to be found the youngest tissue in the human body; the last organ to appear was always the first to go. Thus, in the lung itself, the apex is an atrophying rudiment, and it is just here that tuberculosis develops in about ninety per cent. of the cases. The right apex is now considered to be the atrophying rudiment of a lobe which originally extended up toward the jaw. Where growth is going on rapidly in the bones, *e.g.*, the extremities, we found a

peculiar tendency to the development of tuberculosis. A similar remark applied to the intervertebral cartilages, where Pott's disease was so liable to occur. Therefore, from the standpoint of comparative pathology, the same conclusions seemed to be reached as had been arrived at by clinical research and treatment. He thought we had in our own tissues a more effective protective agent and antitoxin than the venom of the rattlesnake against the enemies about us.

DR. HANCE, in closing the discussion, said that he had been particularly interested in the discussion, because it had enlightened him regarding the effect of the medicinal treatment of pulmonary tuberculosis irrespective of the influence of climate. Any one who had heard the bitter upbraiding and reproachful remarks of patients coming to the sanitarium, because their physicians had not told them at the outset the nature of their trouble, could hardly fail to be convinced of the expediency of being frank with such individuals. Regarding the statement as to the unusual frequency of hemorrhages in the Adirondacks, he would say that in most instances it would be found that these hemorrhages had been brought about by imprudent exercise. As a nutrient he had found it advantageous to use somatose, made into a paste with hot water, and then dissolved in milk or cocoa. Its flavor was agreeable. He had found that slight stomach derangements yielded readily to the use of a preparation known as aquozone. As a general rule, it might be said that stimulants were not advisable in the first and second stages. In conclusion, he expressed the opinion that climatic treatment was *the* method; it was certainly the one which medical men adopted most promptly when they found themselves afflicted with pulmonary tuberculosis.

REVIEWS.

OUTLINES OF MATERIA MEDICA AND PHARMACOLOGY.
A Text-book for Students. By H. M. BRACKEN, M.D., Professor of *Materia Medica, Therapeutics, and Clinical Medicine*, University of Minnesota. Philadelphia: P. Blakiston, Son & Co.

IT is easy to understand the purpose of this book, but why it should come from the hand of a college professor, and why it should seek circulation outside of the circle of his own students is not so plain. It is a compilation of the pharmacopeia, and of a number of well-known handbooks, such as Curtis' "General Medicinal Technology," and Wood's "Therapeutics." The book will be of practical use to students pursuing a course of college lectures, as furnishing a series of pegs upon which to hang a completer knowledge of *Materia Medica*. The author has not designed the book as one from which to learn practical therapeutics, nor as a book of reference for practitioners, and indeed the absence of suitable indexes would render it useless for any such purpose. As a book of reference for undergraduates, in their attempt to memorize medicinal technology the book will fill a place, such as is usually supplied in each center of medical education, by some enterprising student or quiz-master.

AN AMERICAN TEXT-BOOK OF SURGERY FOR PRACTITIONERS AND STUDENTS. By CHARLES H. BURNETT, M.D., PHINEAS S. CONNOR, M.D., FREDERICK S. DENNIS, M.D., WILLIAM W. KEEN, M.D., CHARLES B. NAUCREDE, M.D., ROSWELL PARK, M.D., LEWIS S. PILCHER, M.D., NICHOLAS SENN, M.D., FRANCIS J. SHEPHERD, M.D., LEWIS A. STIMSON, M.D., WILLIAM THOMPSON, M.D., J. COLLINS WARREN, M.D., and J. WILLIAM WHITE, M.D. Edited by WILLIAM W. KEEN, M.D., and J. WILLIAM WHITE, PH.D., LL.D. Second edition. Carefully revised. Philadelphia: W. B. Saunders, 1895.

THREE years is a short period in the history of medical science, but so rapidly have improvements followed one another in surgical matters, during the past three years, since the first edition of this text-book appeared, that, in revising the work, it was found necessary to add some topics and to amplify others.

The lacunæ, which the reviewer of the first edition was able to point out, have been, in a great measure, filled, and such chapters as that of the Hartley-Krause method of removing the Gasserian ganglion; the use of the Murphy button in intestinal anastomosis; castration for the cure of enlarged prostate; Witzel's method of doing gastrostomy; that on symphyseotomy, and a number of others, have prevented the reviewer of to-day from readily discovering a subject which has been omitted. There were, too, in the first issue, certain errors which escaped the notice of the editors and proof-readers. Some of these have been corrected in the text, others by inserted slips, while others have still eluded observation, and remain for the student and reader to discover. Under "Anesthetics," cocaine receives less attention than it deserves, and the man who did so much to bring its value into prominence deserves a better fate than to have his name appear as "Kohler."

The subject of erysipelas is inadequately treated, and ichthiol, which has surely proven itself a most valuable remedy, is not mentioned.

The surgical diseases of the skin are not discussed in a manner worthy of such a work, and the treatment recommended often leaves much to be desired.

Little is said about the treatment of inoperable malignant growths by injections, especially with the toxins of erysipelas, but since the gravest doubts exist as to this method ever being of real utility, perhaps the less said about it the better.

The personal element, which is so attractive a feature of the writings of a single author, when he is a master of his subject, is almost totally lacking in a work of this kind. It is further to be regretted that the name of the writer is not indicated for each individual chapter, since it naturally often adds interest to know to which particular one of the collaborators the views advanced should be attributed.

Passing to the more strictly surgical portions of the work, and especially to those chapters which deal with actual operative work, and the descriptions of technic, and we find here so much to admire that we forget al-

most to criticize. Every surgical disease and every operation having a just claim to recognition has been at least touched upon, while many have been discussed at length.

All that is best in American surgery is here adequately reflected, but the objective point of making this an American text-book of surgery, and not simply a text-book of American surgery, has never been lost sight of.

The art of book illustration has reached a high degree of perfection, and one unwittingly forms an opinion of a work nowadays by glancing over the pictures. Such a course would do an injustice to the text in the present instance, for, while the cuts and plates are numerous, they are by no means of superior beauty of execution.

CLINICAL LECTURES ON ABDOMINAL SURGERY AND OTHER SUBJECTS. By CHARLES T. PARKES, A.M., M.D., Late Professor of Surgery Rush Medical College, etc. Edited by DR. A. J. OCHSNER, Chicago. The W. T. Keener Company, 1896, pp. 477.

THIS memorial volume contains an account of more or less of the clinical and experimental work of an ardent and gifted surgeon.

The lectures on abdominal tumors, which occupy the first part of the volume, are particularly lucid and attractive in style, and clearly account for the strong hold which the writer had as a teacher. They are followed by lectures on gunshot wounds of the stomach, including experimental work indicating careful and cultivated observation, renal calculus, and surgical operations upon the kidney, tuberculosis, and general clinical surgery.

The impression which is produced by the reading of this volume is essentially the earnestness and intensity of the writer. The field which he occupied must have been a large one, and the gap caused by his too early departure must be correspondingly large. His friends who cherish his memory have good reason to rejoice in this permanent record of his useful life and services.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX. By Thirty-seven Contributors. New York: E. B. Treat, 1896. Pp. 728, (including forty-six introductory pages and full-page illustrations).

THE present is the fourteenth year of this work of reference for medical practitioners, and is so far up-to-date that the new photography is not omitted. Concerning this compilation of abstracts there is but little to remark. It shows much industry and considerable reading, and will doubtless be useful to the practising physician. We could wish that more representative papers had been studied in some instances, and that the more recent literature had been drawn upon. Of noteworthy sections may be mentioned Hare's therapeutic review for the past year, and the special articles by Thies, Jennings, Thorburn, and Smith. The last, however, does not completely cover the literature.

Although the space devoted to the several departments is not always in accordance with their relative importance, yet a study of this work will be of benefit in enlarging the knowledge of the careful practitioner.

THE NATIONAL FORMULARY (Supplement to the National Dispensatory). Philadelphia and New York: Lea Brothers & Co., 1896. Pp. 115.

THIS new and revised edition contains 454 formulas. Some of these are from the "United States Pharmacopeia" of 1880, others are from various official sources, and many are formulas the result of careful experiment, to meet a demand for eligible preparations of commonly used drugs. The arrangement is alphabetical, synonyms are frequent, and considerable information besides that of mere preparation is contained in these clearly printed pages. This should be conveniently at the hand of every physician who wishes to meet indications with accurate dosage and acceptable preparations. By strictly adhering to the nomenclature and authority of this volume, the various trade preparations which are lauded in advertising pamphlets would soon fail of finding a market, and the progressive practitioner would find his usefulness increased.

THE RETROSPECT OF MEDICINE. Edited by JAMES BRAITHWAITE, M.D., Lond., Obstetric Physician and Surgeon to the Leeds General Infirmary, etc., assisted by E. F. TREVELYAN, M.D., Lond., B. Sc., M. R. C. P., Assistant Physician to the Leeds General Infirmary, etc. London: Simpkin, Marshall, Hamilton, Kent, & Co., 1896. Vol. 112. Pp. 431.

THE convenient volume which summarizes the progress of medicine and surgery for the last half of the preceding year, comes to us bearing the same evidence of careful reading, accurate abstracting, and judicious selecting, which have made Braithwaite the mentor of progressive practitioners for more than half a century. Although of small bulk, this volume fairly represents the real advance of the science of healing.

COLOR-VISION AND COLOR-BLINDNESS, A Practical Manual for Railway Surgeons. By J. ELLIS JENNINGS, M.D. Philadelphia: The F. A. Davis Co., 1896. 8vo., 110 pages, with a colored plate and twenty-one photo-engravings.

THIS little brochure, neatly gotte up, discusses concisely and clearly, the subject of color-blindness, and the methods of detecting the same. The tests employed are Holmgren's and Olliver's modifications. The author is to be congratulated in that he goes no farther into the abstruse physics of the subject than is essential to clearly elucidate the points under discussion. The book cannot but prove of great value to those for whom it is written.

MATERIA MEDICA AND THERAPEUTICS. Third edition. JOHN V. SHOEMAKER, M.D. Philadelphia and London: The F. A. Davis Co., 1895. Pp. 1100.

IN the preface to this, the third edition, the author makes particular mention of the fact that the two volumes of previous editions have been combined into one. In the two years that have elapsed since the second edition, much new material has been added with reference to hydrogen peroxid, trional, and various compounds of naphthol and phenol, and a number of sections deal with drugs discovered since the publication of the second edi-

tion. Revisions have also been made to conform with the U. S. P. of 1890. The volume, of a little over 1100 pages, is clearly printed on paper that is smooth, without reflecting a glare of light.

In any scientific treatise, dealing with a succession of separate items, the choice must be made between systematic and alphabetical arrangement. For a lecture course and for a text-book for students, the former is a preferable, but, considering the impossibility of making a satisfactory classification of drugs, the author has done wisely in putting before the practitioner, an alphabetical arrangement of the *materia medica*.

We regret that the metric system has been practically ignored. Although the statements of doses in grains and of proportions in grains to the ounce, will doubtless suit the majority of the profession, we do not think that the convenience of the very considerable minority of metric prescribers should have been entirely ignored, especially as the apothecary's system is no longer official except by tolerance. Except for comparatively unimportant drugs, black-letter headings divide the discussion according to pharmacology, physiological action, and therapy. Each subject is handled concisely but quite fully.

ANNOUNCEMENT.

TETANUS ANTITOXIN.

(TETANUS ANTITOXIC SERUM.)
PREPARED IN THE BACTERIOLOGICAL LABORATORY OF THE
CITY OF NEW YORK.

THE NEW YORK CITY HEALTH DEPARTMENT is prepared to furnish antitoxic serum for the treatment of tetanus. Each vial contains 20 c.c. of serum, having an immunizing power of 1 to 3,000,000; *i.e.*, one c.c. of serum protects three million grams of guinea-pigs in weight from a fatal dose of tetanus toxin. The average initial dose of the serum varies with the age of the patient, the gravity of the case, and the time when treatment is begun.

The remedy is administered by deep hypodermic injections, a large syringe (such as has been employed for diphtheria antitoxin) being preferably employed for the purpose, although an ordinary hypodermic syringe carefully cleaned may be used, the barrel of the syringe being repeatedly filled. Some point on the anterior surface of the body should be chosen for the injection, where there is an abundance of subcutaneous cellular tissue, as the anterior surface of the abdomen, or thorax, or the outer surface of the thigh. Before the remedy is administered the skin should be carefully washed with alcohol, or some disinfecting solution, and the syringe carefully sterilized and then washed with sterilized water. The solution is rapidly absorbed, and it is better not to employ massage over the point of injection.

IT IS OF VITAL IMPORTANCE IN TETANUS THAT THE ANTITOXIN BE ADMINISTERED AT THE EARLIEST POSSIBLE MOMENT, AS THE DOSE REQUIRED TO NEUTRALIZE THE TETANUS TOXIN ABSORBED INCREASES WITH GREAT RAPIDITY WITH EACH HOUR'S DELAY.

When the treatment is begun at the first appearance of

tetanic symptoms and they do not point to a very severe infection, and especially when the incubation period has been long, *e.g.* two weeks; one vial, or 20 c.c., may suffice for the first injection, and, according to the results, one-half the quantity or the same quantity should be repeated at intervals of from six to twelve hours during the four following days.

If the infection is intense, as shown by a short incubation period, *e.g.* five to eight days; or by the rapid development of the tetanic symptoms, and by the predominance and intensity of bulbar phenomena, or if the treatment is begun several days after the appearance of the tetanic symptoms, even if at the time of injection they are not severe, the contents of one vial should be at once injected, and the dose repeated at short intervals, according to the effect produced on the tetanic symptoms.

The doses required where the wound has been previously untreated, even if the symptoms are slight, are usually large. The dose for children under twelve should be one-half or less that for an adult. The use of tetanus antitoxin does not preclude the employment of other remedies, such as chloral, the bromids, physostigmin, or morphin. Some one or more of these remedies should be employed in full doses. It is also thought to be advantageous to give large amounts of water to the patient for its diuretic effect, as the tetanus toxin is eliminated by the kidneys.

Where tetanus follows some wound of the surface, this should be treated freely with some preparation of iodin in solution, to destroy the toxins in it. The ordinary antiseptic solutions, such as carbolic acid, and bichlorid of mercury, are of little value for this purpose.

The exact value of tetanus antitoxin in the treatment of this disease, and the best method of administration, have not been fully determined, and the Health Department of the City of New York specially requests that all persons using this preparation of antitoxic serum will forward a full report to the Department of the case, and the results of treatment.

All public institutions in New York City, on application, will be furnished with tetanus antitoxin free of charge.

Address "The Bacteriological Laboratories," Health Department, Criminal Court Building, Centre street.

Telephone, "448 Franklin."

Approved by the Board of Health at a meeting held May 19, 1896.

CHARLES G. WILSON,
President.

EMMONS CLARK, *Secretary.*

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MAY 5, 1896, TO MAY 11, 1896.

Major Daniel G. Caldwell, Surgeon, having been found incapacitated for active service by reason of disability incident to the service, is, by direction of the President, retired from active service this date, May 2, 1896.

Captain Charles E. Woodruff, Assistant Surgeon, now at Fort

Sheridan, Illinois, is detailed for temporary duty as Attending Surgeon in Chicago, retaining his station at Fort Sheridan.

FROM MAY 19, 1896, TO MAY 26, 1896.

Captain Richard W. Johnson, Assistant Surgeon, granted leave of absence for thirty days, to take effect about May 14, 1896.

Lieutenant Colonel William E. Waters, Deputy Surgeon General, granted leave of absence for two months, to take effect on or about July 1, 1896.

Major H. O. Penley, Surgeon, granted three months leave of absence, to take effect about July 1, 1896.

First Lieutenant James M. Kennedy, Assistant Surgeon, Fort Missoula, Montana, ordered to Fort Yellowstone, Wyoming, for temporary duty with troops in the field, in the National Park, during the season.

PROMOTIONS.

To be Assistant Surgeons, with the rank of Captain, May 4, 1896, after five years' service:

First Lieutenant William F. Lippitt, Jr., Assistant Surgeon.

First Lieutenant Merritte W. Ireland, Assistant Surgeon.

First Lieutenant George M. Wells, Assistant Surgeon.

OFFICIAL LIST OF THE CHANGES OF STATION AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE FIFTEEN DAYS ENDED MAY 15, 1896.

MURRAY, R. D., Surgeon. To inspect quarantine ports on Gulf Coast of Florida, West of and including Apalachicola and the coasts of Alabama and Mississippi, May 1, 1896.

BAILHACHE, P. H., Surgeon. To inspect quarantine ports on the coasts of Connecticut, New York, and New Jersey as far South as Sandy Hook, May 1, 1896.

PURVANCE, GEORGE W., Surgeon. To inspect quarantine ports on coast of New Jersey, South of Sandy Hook, and on Delaware Bay and River, May 1, 1896.

SAWTELLE, H. W., Surgeon. To inspect quarantine ports on the coasts of Louisiana and Texas, May 1, 1896.

AUSTIN, H. W., Surgeon. To inspect quarantine ports from Northern port of Maine, to extreme northern port of Rhode Island, May 1, 1896.

STONER, GEORGE W., Surgeon. To inspect local quarantine station at Baltimore, Md., May 1, 1896.

GODFREY, JOHN, Surgeon. To inspect quarantine ports on the coast of California, May 1, 1896.

CARTER, H. R., Surgeon. To inspect Cape Charles Quarantine Station, and quarantine stations at Newport News, Norfolk, and Richmond, Va., and quarantine ports on the coasts of North and South Carolina, Georgia, Florida, and the coast east of Apalachicola, excluding Key West, May 1, 1896.

PECKHAM, C. T., Passed Assistant Surgeon. To inspect quarantines on the coast of Washington, exclusive of ports on the Columbia River, May 1, 1896. Granted leave of absence for thirty days on account of sickness, May 15, 1896.

HASDIN, EUGENE, Passed Assistant Surgeon. Granted leave of absence for two days from May 14, 1896.

GUITERAS, G. M., Passed Assistant Surgeon. To inspect local quarantine station at Key West, Fla., May 1, 1896.

PERRY, J. C., Passed Assistant Surgeon. To inspect quarantine ports on the coast of Oregon and the Columbia River, May 1, 1896.

SPRAGUE, E. K., Assistant Surgeon. To proceed from Mobile, Ala., to Boston, Mass., for duty, May 1, 1896. To defer departure for Boston, Mass., until return of Surgeon Murray, May 6, 1896.

CUMMING, H. S., Assistant Surgeon. To proceed to Norfolk, Va., for temporary duty, May 12, 1896.

MATHEWSON, H. S., Assistant Surgeon. When relieved at Boston, Mass., to proceed to San Francisco, Cal., for duty, May 1, 1896.